



**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES
LARGE AIRCRAFT**

BIWEEKLY 2000-09

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U.S. Department of Transportation
Federal Aviation Administration
Regulatory Support Division
Airworthiness Programs Branch, AFS-610
P. O. Box 26460
Oklahoma City, OK 73125-0460
FAX 405-954-4104

LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; + - See AD for additional information.

Biweekly 2000-01

99-27-01		Pratt & Whitney	Engine: JT8D-209, -217, -217A, -217C, and -219
99-27-03		Fokker	F27 Mark 050 Series
99-27-04		Rolls-Royce	Engine: Dart 506, 510, 511, 514, 525, 526, 529, 530, +
99-27-05		Boeing	767-200, -300, and -300F Series
99-27-06		Boeing	757-200, -200PF, and -200CB Series
99-27-07	S 98-25-53	Airbus	A300 B4-600R and A300 F4-600R Series
99-27-08		SAAB	SAAB SF340A and SAAB 340B Series
99-27-09		Airbus	A300 B4-203 Series
99-27-10		Airbus	A310 and A300-600 Series
99-27-11		British Aerospace	BAC 1-11 200 and 400 Series
99-27-13		Fokker	F27 Mark 050 Series
99-27-14	S 99-01-15	Airbus	A340-211, -212-, -213, -311, -312, and -313 Series
99-27-15		General Electric	Engine: GE90-76B, -77B, -85B, -90B, and -92B
99-27-16		CFE	Engine: CFE738-1-1B
2000-01-51	E	Bombardier	CL-600-2B16 (CL-604)

Biweekly 2000-02

98-19-15 R1	R 98-19-15	Fairchild	SA226-T, SA226-T(B), SA226-AT, SA226-TC +
99-26-21		Boeing	737-300, -400, -500, -600, -700, and -800 Series
2000-01-01		Airbus	A300 B2-1A, B2-1C, B2-203, B2K-3C, B4-103, B4-2C +
2000-01-02		Raytheon	BAe.125 Series 1000A and 1000B and Hawker 1000 Series
2000-01-03		SAAB	SAAB 2000 Series
2000-01-04		SAAB	SAAB 2000 Series
2000-01-07		Bombardier	DHC-8-100, -200, and -300 Series
2000-01-08		British Aerospace	ATP
2000-01-09		General Electric	Engine: CJ610 Series and CF700 Series
2000-01-12	S 97-14-11	Bombardier	CL-600-2B19 (Regional Jet Series 100) Series
2000-01-13	S 99-08-12	Pratt & Whitney	Engine: JT9D-7, -7A, -7H, -7AH, -7F, -7J, -20, -20J +
2000-01-14		Boeing	777 Series
2000-01-15		Fokker	F27 Mark 050 Series
2000-01-17		McDonnell Douglas	MD-90 Series
2000-01-18		McDonnell Douglas	DC-8 Series
2000-01-51		Bombardier	CL-604 variant of Canadair Model CL-600-2B16 Series
2000-02-01		McDonnell Douglas	DC-8 Series
2000-02-02		Short Brothers	SD3-60 SHERPA, SD3-SHERPA Series and SD3-30 Series
2000-02-03		Boeing	737-300, -400, and -500 Series
2000-02-04		Airbus	A300 Series, A300-600, and A310 Series
2000-02-13		Bombardier	DHC-8-100, -200, and -300 Series

Biweekly 2000-03

99-26-03	COR	McDonnell Douglas	MD-11 Series
2000-02-05	S 98-24-01	British Aerospace	Jetstream 4101
2000-02-06		Bombardier	DHC-8-100, -200, and -300 Series
2000-02-07		Bombardier	DHC-7-100 Series
2000-02-08		Dornier	328-100 Series
2000-02-10		Boeing	747 Series
2000-02-11		Boeing	777-200 Series
2000-02-15		Raytheon	65-90, 65-A90, B90, and C90
2000-02-17		Rolls-Royce	Engine: RB211 Trent 768-60, 772-60, and 772B-60 Series
2000-02-18	S 97-09-14	Boeing	737-100, -200, -300, -400, and -500 Series

LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; + - See AD for additional information.

Biweekly 2000-03...Cont'd

2000-02-19	S 90-02-16	Boeing	727 Series
2000-02-20	S 95-13-12 R1	Boeing	767 Series
2000-02-21		British Aerospace	Jetstream 4101
2000-02-22		Boeing	747-400 Series
2000-02-23		McDonnell Douglas	DC-9-10, -20, -30, -40, and -50 Series and DC-9-81, +
2000-02-24		Airbus	A300, A310, and A300-600 Series
2000-02-33		Boeing	747-400 Series
2000-02-34		Bombardier	CL-600-2B19 (Regional Jet Series 100) Series
2000-02-35		Raytheon	DH.125, HS.125, BH.125 Series 1A, 1B, 3A, 400A, +
2000-02-36	S 98-20-10	Airbus	A319, A320, and A321 Series
2000-02-37		Boeing	747 Series
2000-02-38	S 91-20-07	Airbus	A300, A300-600, and A310 Series
2000-03-01		Boeing	747-100 and -200 Series
2000-03-02		General Electric	Engine: GE90-90B, -85B, and -76B Series
2000-03-03		General Electric	Engine: CF34-3A1 and -3B1 Series

Biweekly 2000-04

99-23-26 R1		General Electric	Engine: CF34-1A, CF34-3A, -3A1, -3A2, and CF34-3B +
2000-02-27		Empresa	EMB-110P1 and EMB-110P2
2000-02-39		Airbus	A300 Series
2000-03-04		General Electric	Engine: CF6-80C2 Series turbofan
2000-03-05		Boeing	737-200 Series
2000-03-07		Rolls-Royce	Engine: RB211-524H-36 Series turbofan
2000-03-08		McDonnell Douglas	MD-90-30
2000-03-10		McDonnell Douglas	MD-11 Series
2000-03-11		McDonnell Douglas	MD-11 Series
2000-03-12		McDonnell Douglas	MD-11 Series
2000-03-13		McDonnell Douglas	MD-11 Series
2000-03-14		McDonnell Douglas	MD-11 Series
2000-03-15		McDonnell Douglas	MD-11 and MD-11F Series
2000-03-16		McDonnell Douglas	MD-11 Series
2000-03-17	S 97-23-01	Fairchild	SA226 and SA227 Series
2000-03-20		Airbus	A300-600
2000-03-21		Boeing	767
2000-03-22		Boeing	747-100, -200, and 747SP Series
2000-04-02		Boeing	737-100, -200, -300, -400, and -500 Series
2000-04-03		McDonnell Douglas	DC-3 and DC-4 Series
2000-04-04		Fokker	F.28 Mark 0070 and 0100 Series
2000-04-05		Israel	Astra SPX Series
2000-04-06		Airbus	A319, A320, and A321 Series
2000-04-07		British Aerospace	ATP
2000-04-08		Boeing	737-200C Series
2000-04-09		Empresa	EMB-135 and EMB-145 Series
2000-04-10		Hoffmann	Propeller: HO27() and HO4/27 Series
2000-04-11		Airbus	A319, A320, and A321 Series

Biweekly 2000-05

98-21-21	R1	Bob Fields Aerocessories	Appliance: Electric inflatable door seals
2000-03-51		McDonnell Douglas	DC-9, MD-90-30, 717-200, and MD-88
2000-04-13		Aerospatiale	ATR72 Series

LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Biweekly 2000-05...Cont'd			
2000-04-14		General Electric	Engine: CF6-80C2 A1/A2/A3/A5/A8/A5F/B1/B2/B4/B6 +
2000-04-17		Boeing	747-100, -200, and -300 Series
2000-04-18		Boeing	757 Series
2000-04-19		Dassault	Mystere-Falcon 50 Series
2000-04-22		Rolls-Royce	Engine: RB211-524G2-T-19, RB211-524G3-T-19, +
2000-04-23		Dornier	328-100 Series and 328-300 Series
2000-05-09		Boeing	757-200, -200PF, and -200CB Series
2000-05-10		General Electric	Engine: GE90-85B Series turbofan
Biweekly 2000-06			
2000-03-03	COR	General Electric	Engine: CF34-3A1 and -3B1 Series turbofan
2000-04-24		Honeywell International	Appliance: 36-300(A), 36-280(B), and 36-280(D) Series
2000-05-01		McDonnell Douglas	MD-11 Series
2000-05-02		Fokker	F27 Mark 050, 200, 500, and 600 Series
2000-05-04		Airbus	A330 and A340 Series
2000-05-05		Construcciones Aeronauticas	CN-235-100 and CN-235-200 Series
2000-05-07		Airbus	A300 and A300-600 Series
2000-05-08		Airbus	A319 and A321 Series
2000-05-14	S 80-22-53	AlliedSignal	Engine: ALF502 and LF507 Series turbofan
2000-05-18		Airbus	A300, A310, and A300-600 Series
2000-05-19		Boeing	727 Series
2000-05-20		Dassault	Fan Jet Falcon, Mystere-Falcon 20, 50, 00, and 900 Series +
2000-05-21		Airbus	A319, A320, A321, A330, and A340 Series
2000-05-24		Honeywell International	Appliance: KAP 140 or KFC 225 autopilot system
2000-05-25	S 96-14-09	British Aerospace	BAe 146-100A, and -300 Series
2000-05-26	S 93-18-04	Aerospatiale	ATR42-200, ATR42-300, and ATR42-320 Series
2000-05-27	S 98-21-06	British Aerospace	BAe 146-100A, -200A, and -300A Series
2000-05-28		British Aerospace	BAe 146 and Avro 146-RJ Series
2000-05-29		Boeing	737-100, -200, -300, -400, and -500 Series
2000-05-30		Boeing	747-100, -100B, -100B SUD, -200B, -200C, -200F, -300 +
2000-06-02		Dornier	228-100, 228-101, 228-200, 228-201, 228-202, +
2000-06-04		Fairchild	SA226-T, SA226-AT, SA226-T(B), SA227-AT, +
Biweekly 2000-07			
2000-05-22		CFM International	Engine: CFM56-2, -2A, -2B, -3, -3B, and -3C Series
2000-06-08	S 98-01-15	Airbus	A330-301, -321, -322, -341, -342, A340-211, -212, -213 +
2000-06-13	S 98-25-06	Boeing	737-200, -200C, -300, -400 Series
2000-07-01	S 98-13-34	Embraer-Empresa Brasileira	EMB-145 Series
2000-07-02		McDonnell Douglas	MD-11 Series
2000-07-51	E	McDonnell Douglas	717-200 Series
Biweekly 2000-08			
2000-01-05	S 99-18-03	Boeing	747-100B, -200, -300, and SP Series
2000-05-03		Airbus	A300-600 and A310 Series
2000-05-12		Rolls-Royce	Engine: RB211-524G2-19, RB211-524G3-19, +
2000-05-13		Boeing	737-100, -200, -300, -400, and -500 Series
99-13-08 R1		Lockheed	L-1011-385 Series
99-23-22 R2	Recission	Transport Category Airplanes	Appliance: Mode "C" Transponder
2000-07-05	S 99-07-06	Boeing	767 Series
2000-07-06		Boeing	737-100, -200, -200C, -300, -400, and -500 Series
2000-07-07		Airbus	A300 Series

LARGE AIRCRAFT

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Biweekly 2000-08...Cont'd			
2000-07-08		Boeing	777 Series
2000-07-10		Boeing	747-200B, -300, -400, -400D, -400F Series
2000-07-11		Industrie Aero. Mec.	Piaggio P-180
2000-07-13		Boeing	757-200, -200PF Series
2000-07-14		McDonnell Douglas	MD-11 Series
2000-07-15		McDonnell Douglas	MD-11 Series
2000-07-16	S 94-11-06	McDonnell Douglas	MD-11 and MD-11F Series
2000-07-18		McDonnell Douglas	MD-11 and MDj-11F Series
2000-07-20		McDonnell Douglas	MD-11 Series
2000-07-21		McDonnell Douglas	MD-11 Series
2000-07-22		Airbus	A300-600 Series
2000-07-23		Bombardier	DHC-8-100 Series
2000-07-24		Fokker	F.28 Mark 0070 and 0100
2000-07-25		Gulfstream Aerospace	G-IV Series
2000-07-27		Transport Category Airplanes	Appliance: Honeywell Air Data Inertial Reference Unit
2000-07-28	S 99-18-22	Fokker	F27 Series
2000-07-29	S 98-16-09	Airbus	A300, A310, and A300-600 Series
2000-08-01		Rolls-Royce	Engine: Tay 650-15 Series Turbofan
2000-08-03	S 2000-05-01	McDonnell Douglas	MD-11 Series
Biweekly 2000-09			
95-19-04 R1	Rescission	Learjet	35, 35A, 36, 36A, 55, 55B, and 55C
99-27-14	COR	Airbus industrie	A340-211, -212, -213, -311, -312, and -313 Series
	S 99-01-15		
2000-05-06		Raytheon Aircraft Company	400A series and 400T Series
2000-07-04		Dornier Luftfahrt GMBH	328-100 series
2000-07-09		Boeing	737-600, -700, and -800 series
2000-07-12		Boeing	727-100, -100C, and -200 Series
2000-07-17		McDonnell Douglas	MD-11 Series
2000-07-19		McDonnell Douglas	MD-11 Series
2000-07-26		Airbus Industrie	A300 Series
2000-07-51		McDonnell Douglas	717-200 Series
2000-08-07	S 96-24-16	Raytheon Aircraft Co	BAe 125-800A and BAe 125-800B, Hawker 800, +
2000-08-08		Boeing	737-600, -700, and -800 Series
2000-08-10	S 99-08-17	General Electric Company	Engine: GE90-76B/ -77B/ -85B/ -90B/ -92B Series
2000-08-11	S 99-08-18	General Electric Company	Engine: CF6-6, CF6-45, and CF6-50 Series
2000-08-12	S 99-08-13	General Electric Company	Engine: CF6-80A, CF6-80C2, and CF6-80E1 Series
2000-08-13		Learjet	45
2000-08-14		Boeing	747 Series
2000-08-15		Boeing	777 Series
2000-08-17		Boeing	737-100, -200, -300, -400, and -500 Series
2000-08-19		Boeing	727 and 727C series
2000-08-20		Lockheed	L-1011-385-1, -1-14, -1-15, and -3 Series
2000-08-21		Boeing	747 Series
2000-09-01	S 93-20-02	McDonnell Douglas	DC-8 Series
2000-09-02		McDonnell Douglas	DC-8 Series
2000-09-03	S 2000-02-33	Boeing	747-400 Series
2000-09-04	S 2000-02-20	Boeing	767 Series
2000-09-05		Allison Engine Company	Engine: AE 3007A, AE 3007A1, AE 3007A1/1, +

BW 2000-09

**LEARJET
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

RESCISSION

95-19-04 R1 LEARJET: Amendment 39-11649. Docket No. 99-NM-311-AD. Rescinds AD 95-19-04, Amendment 39-9365.

Applicability: Model 35, 35A, 36, 36A, 55, 55B, and 55C airplanes; equipped with Global Wulfsburg GNS 500, GNS-1000, and GNS-X Flight Management Systems; certificated in any category.

This rescission is effective March 27, 2000.

FOR FURTHER INFORMATION CONTACT:

C. Dale Bleakney, Aerospace Engineer, Flight Test Branch, ACE-117W, FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4135; fax (316) 946-4407.

Issued in Renton, Washington, on March 20, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**AIRBUS INDUSTRIE
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

99-27-14 AIRBUS INDUSTRIE: Amendment 39-11495. Docket 99-NM-336-AD. Supersedes AD 99-01-15, Amendment 39-10980. Issued December 28, 1999.

Applicability: All Model A340-211, -212, -213, -311, -312, and -313 series airplanes; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent the inadvertent opening of a thrust reverser door in the event of failure of the primary and secondary locks of the thrust reverser, which could result in reduced controllability of the airplane, accomplish the following:

Operational Test

(a) Prior to the accumulation of 1,300 total flight hours, or within 500 flight hours after January 25, 1999 (the effective date of AD 99-01-15, amendment 39-10980), whichever occurs later, perform an operational test (inspection) to ensure proper operation of the actuator of the secondary locks of the thrust reversers, in accordance with Airbus Service Bulletin A340-78-4012, Revision 01, dated December 19, 1996, or Revision 05, dated July 6, 1999. Thereafter, repeat the operational test at intervals not to exceed 1,300 flight hours. After the effective date of this AD, only Revision 05 of the service bulletin shall be used.

NOTE 2: The Airbus service bulletin references ROHR Service Bulletin RA34078-47, Revision 1, dated November 30, 1996, as an additional source of service information for accomplishment of the operational test.

Corrective Action

(b) If any discrepancy is detected during any operational test (inspection) required by paragraph (a) of this AD, prior to further flight, replace the actuator of the secondary lock with a new or serviceable actuator, in accordance with ROHR Service Bulletin RA34078-47, Revision 1, dated November 30, 1996.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The operational tests and replacement shall be done in accordance with Airbus Service Bulletin A340-78-4012, Revision 01, dated December 19, 1996; Airbus Service Bulletin A340-78-4012, Revision 05, dated July 6, 1999; and ROHR Service Bulletin RA3478-47, Revision 1, dated November 30, 1996, which contains the following list of effective pages:

Page number	Revision level shown on page	Date shown on page
1, 5, 6	1	November 30, 1996
2-4, 7	Original	September 16, 1996

(1) The incorporation by reference of Airbus Service Bulletin A340-78-4012, Revision 05, dated July 6, 1999, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Airbus Service Bulletin A340-78-4012, Revision 01, dated December 19, 1996; and ROHR Service Bulletin RA34078-47, Revision 1, dated November 30, 1996; was approved previously by the Director of the Federal Register as of January 25, 1999 (64 FR 1108, January 8, 1999).

(3) Copies may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; and ROHR, Inc., 850 Lagoon Drive, Chula Vista, California 91912. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 4: The subject of this AD is addressed in French airworthiness directive 1999-265-117(B), dated June 30, 1999.

(f) This amendment becomes effective on January 21, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

**RAYTHEON AIRCRAFT COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-05-06 RAYTHEON AIRCRAFT COMPANY (Formerly Beech): Amendment 39-11615. Docket 99-NM-334-AD.

Applicability: Model 400A series airplanes, serial numbers RK-45 and RK-49 through RK-209 inclusive; Model 400T series airplanes (T-1A), serial numbers TT-01 through TT-180 inclusive; and Model 400T series airplanes (TX), serial numbers TX-01 through TX-09 inclusive; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the engine fire extinguisher bottle to discharge, or discharge of the wrong engine fire extinguisher bottle, accomplish the following:

Inspection and Corrective Action

(a) Within 50 flight hours after the effective date of this AD: Perform a one-time general visual inspection of the left and right engine fire extinguisher bottle squibs to detect wiring that is incorrect as specified by Raytheon Aircraft Service Bulletin SB 26-3250, Revision 1, dated July 1999. Perform the inspection in accordance with the service bulletin. If any incorrect wiring is detected, prior to further flight, repair it in accordance with the service bulletin.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Modification

(b) Within 200 flight hours after the effective date of this AD: Modify and re-label the wiring of the left and right engine fire extinguisher bottle squibs, in accordance with Raytheon Aircraft Service Bulletin SB 26-3250, Revision 1, dated July 1999.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Wichita Aircraft Certification Office (ACO), FAA, Small Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Raytheon Aircraft Service Bulletin SB 26-3250, Revision 1, dated July 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Raytheon Aircraft Company, Manager Service Engineering, Beechjet/Premier Technical Support Department, P.O. Box 85, Wichita, Kansas 67201-0085. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road,

2000-05-06

Room 100, Mid-Continent Airport, Wichita, Kansas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on April 12, 2000.

FOR FURTHER INFORMATION CONTACT:

Todd Dixon, Aerospace Engineer, Systems and Propulsion Branch, ACE-116W, FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4152; fax (316) 946-4407.

Issued in Renton, Washington, on February 29, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**DORNIER LUFTFAHRT GMBH
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-07-04 DORNIER LUFTFAHRT GMBH: Amendment 39-11658. Docket 99-NM-40-AD.

Applicability: Model 328-100 series airplanes having serial numbers (S/N) 3005 through 3098 inclusive, and S/N 3100, 3103, 3104, 3106, 3107, 3109, and 3110, on which Dornier Service Bulletin SB-328-76-268, dated August 11, 1998, or Revision 1, dated December 9, 1998, has not been accomplished; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the flight idle backup system, which, in the event of failure of the primary propeller control system, could lead to uncommanded movement of the pitch of the propeller blade to below flight idle and into reverse thrust during flight, and consequent reduced controllability of the airplane, accomplish the following:

Flight Idle Backup Test

(a) Prior to the accumulation of 3,000 total flight hours, or within 3 days after the effective date of this AD, whichever occurs later, perform a test of the flight idle backup system of the propeller control system in accordance with Dornier Alert Service Bulletin ASB-328-76-024, Revision 1, dated August 5, 1998. If any discrepancy is detected, prior to further flight, accomplish the actions required by either paragraph (a)(1) or (a)(2) of this AD. Repeat the test thereafter at intervals not to exceed 1 day until accomplishment of the requirements of paragraph (c), (d), (e), or (f), as applicable.

(1) Repair in accordance with a method approved by either the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate; or the Luftfahrt-Bundesamt (LBA) (or its delegated agent). Or

(2) Accomplish the inspection required by paragraph (b) of this AD, and the applicable follow-on corrective actions required by paragraph (c), (d), or (e) of the AD; AND, if Type C wear is found during the inspection required by paragraph (b), prior to further flight, adjust or calibrate the power lever microswitches in accordance with Dornier Airplane Maintenance Manual JIC 76-11-05-820-000.

Inspection of Cam Followers of Power Lever Rods

(b) Prior to the accumulation of 3,000 total flight hours, or within 7 days after the effective date of this AD, whichever occurs later, perform a detailed visual inspection to determine the level of wear of the pins and bushings of the cam followers of the power lever rods of the engine controls, in accordance with Dornier Alert Service Bulletin ASB-328-76-024, Revision 1, dated August 5, 1998. Classify the level of wear for each power lever rod as specified in paragraphs (b)(1), (b)(2), and (b)(3) and accomplish the requirements of paragraph (c), (d), or (e) of this AD, as applicable, at the times specified in that paragraph.

(1) Type A wear: The bushing is worn such that the pin is visible in one or more locations.

(2) Type B wear: The bushing is worn, but the pin is not visible.

(3) Type C wear: The bushing is not worn.

Corrective Actions

(c) For power lever rods on which Type A wear is detected during the inspection required by paragraph (b) of this AD: Within 900 flight hours after accomplishment of that inspection, accomplish the requirements of paragraph (c)(1) or (c)(2) of this AD in accordance with Dornier Alert Service Bulletin ASB-328-76-024, Revision 1, dated August 5, 1998. Accomplishment of paragraph (c)(1) or (c)(2) terminates the tests required by paragraph (a) of this AD for that power lever rod only.

(1) Replace the power lever rod with a new power lever rod.

(2) Replace the pins and bushings with new pins and bushings, and accomplish paragraphs (c)(2)(i) and (c)(2)(ii) of this AD.

(i) Thereafter, accomplish follow-on inspections and corrective actions (i.e. inspections for wear or looseness of the replaced pins and bushings), at the times and in accordance with the Accomplishment Instructions of the alert service bulletin; and,

(ii) Within 900 flight hours after replacement of the pins and bushings, replace the power lever rod with a new power lever rod.

(d) For power lever rods on which Type B wear is detected during the inspection required by paragraph (b) of this AD: Thereafter, accomplish follow-on inspections and corrective actions at the times and in accordance with the Accomplishment Instructions of Dornier Alert Service Bulletin ASB-328-76-024, Revision 1, dated August 5, 1998, until the requirements of paragraph (f) of this AD are accomplished.

(e) For power lever rods on which Type C wear is detected during the inspection required by paragraph (b) of this AD: Determination of Type C wear terminates the tests required by paragraph (a) of this AD for that power lever rod only. Thereafter, accomplish follow-on inspections and corrective actions at the times and in accordance with the Accomplishment Instructions of Dornier Alert Service Bulletin ASB-328-76-024, Revision 1, dated August 5, 1998, until the requirements of paragraph (f) of this AD are accomplished.

Terminating Action

(f) Within 6 months after the effective date of this AD: Replace the power lever and condition lever rods of the engine controls with new, improved parts in accordance with Dornier Service Bulletin SB-328-76-268, Revision 1, dated December 9, 1998. Accomplishment of the replacement constitutes terminating action for the requirements of this AD.

NOTE 2: Replacement of the power lever and condition lever rods accomplished prior to the effective date of this AD in accordance with Dornier Service Bulletin SB-328-76-268, dated August 11, 1998, is considered acceptable for compliance with paragraph (f) of this AD.

Alternative Methods of Compliance

(g) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) Except as required by paragraphs (a)(1) and (a)(2) of this AD, the actions shall be done in accordance with Dornier Alert Service Bulletin ASB-328-76-024, Revision 1, dated August 5, 1998; and Dornier Service Bulletin SB-328-76-268, Revision 1, dated December 9, 1998; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from FAIRCHILD DORNIER, DORNIER Luftfahrt GmbH, P.O. Box 1103, D-82230 Wessling, Germany. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 4: The subject of this AD is addressed in German airworthiness directive 1998-344/3, dated February 11, 1999.

(j) This amendment becomes effective on May 16, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on March 31, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-07-09 BOEING: Amendment 39-11663. Docket 2000-NM-84-AD.

Applicability: Model 737-600, -700, and -800 series airplanes, line numbers 1 through 477 inclusive, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of control of the airplane during takeoff and landing due to loose nuts on the bolts of the input crank arms of the elevator power control unit (PCU), and consequent loss of pivot bolts, accomplish the following:

NOTE 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(a) Within 30 days after the effective date of this AD, perform a one-time general visual inspection to determine if the nuts installed on the bolts at each end of the input rods connected to each elevator PCU are installed correctly, in accordance with Boeing Telegraphic Service Letter 737-SL-27-150, dated February 14, 2000.

(1) If all bolts are protruding through the nuts, no further action is required by this AD.

(2) If any bolt does not protrude through the nut, prior to further flight, tighten the nut in accordance with the telegraphic service letter.

(b) Within 10 days after accomplishing the inspection required by this AD; or within 10 days after the effective date of this AD if the inspection was accomplished prior to the effective date of this AD: Submit a report of any findings of loose nuts to the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; fax (425) 227-1181. The report must include the operator's name, the date the inspection was accomplished, the airplane line number, and the number of loose nuts found on that airplane. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished

Incorporation by Reference

(e) The actions shall be done in accordance with Boeing Telegraphic Service Letter 737-SL-27-150, dated February 14, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane

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Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on April 25, 2000.

FOR FURTHER INFORMATION CONTACT:

Kenneth W. Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2673; fax (425) 227-1181.

Issued in Renton, Washington, on March 30, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-07-12 BOEING: Amendment 39-11666. Docket 99-NM-53-AD.

Applicability: Model 727-100, -100C, and -200 series airplanes, line numbers 1 through 1214 inclusive; certificated in any category; except those on which the modification specified by either Boeing Service Bulletin 727-57-0127, Revision 2, dated February 13, 1976, or Boeing Service Bulletin 727-57-0127, Revision 3, dated August 24, 1989, has been installed.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (h) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent degradation of the structural capabilities of the affected airplanes, accomplish the following:

Initial Inspection

(a) For those airplanes on which the initial inspection has not been accomplished in accordance with AD 94-07-08, amendment 39-8866: Prior to the accumulation of 16,000 total flight cycles or within 2,000 flight cycles after the effective date of this AD, whichever occurs later, accomplish the inspections required by either paragraph (c) or (d) of this AD.

(b) For those airplanes on which the initial inspection has been accomplished in accordance with AD 94-07-08, amendment 39-8866: Within 2,000 flight cycles after the effective date of this AD, unless accomplished within the last 12,000 flight cycles in accordance with AD 94-07-08, accomplish the inspections required by either paragraph (c) or (d) of this AD.

(c) Perform a fluorescent dye penetrant inspection (Type I) to detect cracking of certain wing ribs at the rib-to-stringer attachment in the areas specified in Boeing Service Bulletin 727-57-0127, Revision 3, dated August 24, 1989; in accordance with Boeing Standard Overhaul Practices Manual D6-51702, Chapter 20-20-02, Revision 79, dated March 1, 1999.

(d) Perform a high frequency eddy current inspection to detect cracking of certain wing ribs at the rib-to-stringer attachment in the areas specified in Boeing Service Bulletin 727-57-0127, Revision 3, dated August 24, 1989; in accordance with Boeing Commercial Jet Nondestructive Test Manual, Chapter 51-00-00, Part 6, dated August 5, 1997.

Repetitive Inspections and Corrective Action

(e) If no crack is detected during any inspection required by either paragraph (c) or (d) of this AD, repeat the applicable inspection thereafter at intervals not to exceed 14,000 flight cycles.

(f) If any crack is detected during any inspection required by either paragraph (c) or (d) of this AD, prior to further flight, repair in accordance with Boeing Service Bulletin 727-57-0127, Revision 3, dated August 24, 1989; or in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD. Repeat the applicable inspection thereafter at intervals not to exceed 14,000 flight cycles, following accomplishment of the repair.

Terminating Action

(g) (1) Accomplishment of the actions required by this AD constitutes terminating action for the inspections required by paragraph (a) of AD 94-07-08, as specified in Boeing Service Bulletin 727-57-0127, Revision 3, dated August 24, 1989.

(2) Accomplishment of the structural modifications specified in either Boeing Service Bulletin 727-57-0127, Revision 2, dated February 13, 1976; or Revision 3, dated August 24, 1989; constitutes terminating action for the requirements of this AD.

Alternative Methods of Compliance

(h) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO, FAA, Transport Airplane Directorate. An alternative method of compliance that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(i) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(j) Except as provided by paragraph (f) of this AD, the repairs shall be done in accordance with Boeing Service Bulletin 727-57-0127, Revision 3, dated August 24, 1989; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(k) This amendment becomes effective on May 16, 2000.

FOR FURTHER INFORMATION CONTACT:

Walter Sippel, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2774; fax (425) 227-1181.

Issued in Renton, Washington, on March 31, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-07-17 MCDONNELL DOUGLAS: Amendment 39-11671. Docket 99-NM-266-AD.

Applicability: Model MD-11 series airplanes, as listed in McDonnell Douglas Alert Service Bulletin MD11-24A130, Revision 01, dated September 20, 1999; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure that the upper main circuit breaker panel opens fully, accomplish the following:

Inspection and a Follow-on Inspection

(a) Within 6 months after the effective date of this AD, perform a general visual inspection to verify that the circuit breaker panel fully opens in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A130, Revision 01, dated September 20, 1999.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(1) If the circuit breaker panel fully opens, prior to further flight, perform a detailed visual inspection of the wires between circuit breakers B1-213 and B1-300 to terminal strip S3-602 to detect chafing damage, in accordance with the service bulletin.

(2) If the circuit breaker panel does not fully open, prior to further flight, perform a detailed visual inspection of the route path from circuit breakers B1-213 and B1-300 to terminal strip S3-602 to detect chafing damage and to determine if the wire can be adjusted or if the wire must be replaced, in accordance with the service bulletin.

NOTE 3: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Corrective Actions

(b) If any wire is found to need adjusting during the inspection required by paragraph (a)(2) of this AD, prior to further flight, adjust the wire in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A130, Revision 01, dated September 20, 1999.

(c) If any wire is found to need replacing during the inspection required by paragraph (a)(2) of this AD, prior to further flight, replace the wire with a new wire in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A130, Revision 01, dated September 20, 1999.

(d) If any chafing damage is found during the inspection required by paragraph (a)(1) or (a)(2) of this AD, prior to further flight, repair in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A130, Revision 01, dated September 20, 1999.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) The actions shall be done in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A130, Revision 01, dated September 20, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective on May 19, 2000.

FOR FURTHER INFORMATION CONTACT:

Brett Portwood, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5350; fax (562) 627-5210.

Issued in Renton, Washington, on April 4, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-07-19 MCDONNELL DOUGLAS: Amendment 39-11673. Docket 99-NM-268-AD.

Applicability: Model MD-11 series airplanes, as listed in McDonnell Douglas Alert Service Bulletin MD11-24A008, Revision 02, dated March 27, 2000; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent chafing and damage to external ground power feeder cables, which could result in electrical arcing and consequent structural damage and smoke and fire in the forward cargo compartment, accomplish the following:

Inspection and Modification

(a) Within 12 months after the effective date of this AD, perform a detailed visual inspection of the external ground power feeder cables in the forward cargo compartment between stations Y=879.000 and Y=1019.000 left of centerline to detect chafing or damage, in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A008, Revision 02, March 27, 2000.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) If any chafing or damage is detected, prior to further flight, repair and install spiral wrap, in accordance with the service bulletin.

(2) If no chafing or damage is detected, prior to further flight, install spiral wrap in accordance with the service bulletin.

NOTE 3: Inspections, repairs, and installations accomplished prior the effective date of this AD in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A008, Revision 01, dated December 2, 1999; are considered acceptable for compliance with the requirements of this AD.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) The actions shall be done in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A008, Revision 02, dated March 27, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). Copies may be inspected at the

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FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on May 19, 2000.

FOR FURTHER INFORMATION CONTACT:

Brett Portwood, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5350; fax (562) 627-5210.

Issued in Renton, Washington, on April 4, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**AIRBUS INDUSTRIE
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-07-26 AIRBUS INDUSTRIE: Amendment 39-11682. Docket 99-NM-304-AD.

Applicability: Model A300 series airplanes, certificated in any category; except those on which Airbus Modification 04201 has been accomplished.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct corrosion of the fuselage skin panel, which could result in cracking and consequent reduced structural integrity of the airplane, accomplish the following:

Inspection

(a) Perform a one-time detailed visual inspection of the outer surface of the fuselage skin panel between fuselage frames FR39 and FR40, and between stringers 27 and 33, for corrosion; in accordance with Airbus Service Bulletin A300-53-0328, Revision 01, including Appendix 01, both dated March 15, 2000. Perform the inspection at the applicable time specified in paragraph (a)(1), (a)(2), or (a)(3) of this AD. If any corrosion is found, prior to further flight, repair (i.e., rework corroded areas, or repair or replace panels, as applicable) in accordance with the service bulletin, except as provided by paragraph (b) of this AD. Temporary repairs must be replaced with permanent repairs prior to accumulation of the life limits specified in the service bulletin.

(1) For airplanes for which the date of manufacture was less than 15 years before the effective date of this AD: Inspect within 18 months after the effective date of this AD.

(2) For airplanes for which the date of manufacture was at least 15 but less than 20 years before the effective date of this AD: Inspect within 12 months after the effective date of this AD.

(3) For airplanes for which the date of manufacture was 20 or more years before the effective date of this AD: Inspect within 6 months after the effective date of this AD.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(b) Where Airbus Service Bulletin A300-53-0328, Revision 01, dated March 15, 2000, specifies that Airbus may be contacted for a repair, prior to further flight, replace the skin panel with a new or serviceable skin panel in accordance with the service bulletin.

NOTE 3: Accomplishment of the actions required by this AD in accordance with Airbus Service Bulletin A300-53-0328, dated March 5, 1999, prior to the effective date of this AD, is acceptable for compliance with the requirements of this AD.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

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Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Airbus Service Bulletin A300-53-0328, Revision 01, including Appendix 01, dated March 15, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 5: The subject of this AD is addressed in French airworthiness directive 1999-209-281(B), dated May 19, 1999.

(f) This amendment becomes effective on May 23, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on April 6, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
FINAL RULE
LARGE AIRCRAFT**

2000-07-51 MCDONNELL DOUGLAS: Amendment 39-11713. Docket 2000-NM-99-AD.

Applicability: All Model 717-200 series airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of all altitude information and subsequent essential navigation data for continued safe flight and landing, accomplish the following:

(a) Prior to further flight, coil and stow the electrical wires between the glareshield control panel and the Integrated Standby Instrument System in accordance with Boeing Alert Service Bulletin 717-34A0002, dated March 30, 2000.

(b) Prior to further flight, revise the abnormal procedures of the Procedures section of the FAA-approved Airplane Flight Manual (AFM) to include procedures for identifying and pulling certain circuit breakers. This must be accomplished by inserting Boeing Interim Operating Procedure 2-17, dated March 31, 2000, into the AFM.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Boeing Alert Service Bulletin 717-34A0002, dated March 30, 2000; and Boeing Interim Operating Procedure 2-17, dated March 31, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on May 10, 2000, to all persons except those persons to whom it was made immediately effective by emergency AD 2000-07-51, issued on April 1, 2000, which contained the requirements of this amendment.

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FOR FURTHER INFORMATION CONTACT:

Thomas Phan, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5342; fax (562) 627-5210.

Issued in Renton, Washington, on April 27, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**RAYTHEON AIRCRAFT
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-07 RAYTHEON AIRCRAFT CO. (Formerly Beech): Amendment 39-11693. Docket 99-NM-13-AD. Supersedes AD 96-24-16, Amendment 39-9840.

Applicability: Model BAe 125-800A and BAe 125-800B, Model Hawker 800, and Model Hawker 800XP series airplanes; as listed in Raytheon Service Bulletin SB.54-1-3815B, Revision 1, dated May 1998; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent an engine fire from moving to the fuselage and to the lines that carry flammable fluid that are located inboard of the firewall, accomplish the following:

RESTATEMENT OF REQUIREMENTS OF AD 96-24-16:

(a) For airplanes identified in AD 96-24-16, amendment 39-9840: Within 6 months after January 27, 1997 (the effective date of AD 96-24-16), fill the two, unused tooling holes in the firewalls of the left and right engine pylons, in accordance with Raytheon Service Bulletin SB.54-1-3815B, dated March 26, 1996, or Raytheon Service Bulletin SB.54-1-3815B, Revision 1, dated May 1998. After the effective date of this AD, only Revision 1 of this service bulletin shall be used.

NEW REQUIREMENTS OF THIS AD:

(b) For all airplanes: Within 6 months after the effective date of this AD, fill all unused tooling holes in the left and right engine pylon firewalls with firewall sealant, in accordance with Raytheon Service Bulletin SB.54-1-3815B, Revision 1, dated May 1998.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Wichita Aircraft Certification Office (ACO), ACE-116W, FAA, Small Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Raytheon Service Bulletin SB.54-1-3815B, dated March 26, 1996; or Raytheon Service Bulletin SB.54-1-3815B, Revision 1, dated May 1998.

(1) The incorporation by reference of Raytheon Service Bulletin SB.54-1-3815B, Revision 1, dated May 1998, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Raytheon Service Bulletin SB.54-1-3815B, dated March 26, 1996, was approved previously by the Director of the Federal Register as of January 27, 1997 (61 FR 66878, December 19, 1996).

(3) Copies may be obtained from Raytheon Aircraft Company, Manager Service Engineering, Hawker Customer Support Department, P.O. Box 85, Wichita, Kansas, 67201-0085. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at

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the FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on May 31, 2000.

FOR FURTHER INFORMATION CONTACT:

Jeffrey A. Pretz, Aerospace Engineer, Systems and Propulsion Branch, ACE-116W, FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4153; fax (316) 946-4407.

Issued in Renton, Washington, on April 14, 2000.

Charles D. Huber, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-08 BOEING: Amendment 39-11694. Docket 2000-NM-88-AD.

Applicability: Model 737-600, -700, and -800 series airplanes; certificated in any category; line numbers 1 through 321 inclusive.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the keel beam structure, accomplish the following:

Inspection

(a) Prior to the accumulation of the total number of flight cycles specified by Table 1, "Compliance Thresholds," as applicable, of Boeing Service Bulletin 737-57-1253, dated December 16, 1999; or within 60 days after the effective date of this AD, whichever occurs later: Perform a one-time high-frequency eddy current inspection to detect cracking of the rear spar stiffeners that are located at the left and right buttock lines 6.15 of the wing center section, in accordance with the service bulletin.

(1) If no cracking is detected in either stiffener: Prior to further flight, install the preventive modification on that stiffener, in accordance with the service bulletin.

(2) If any cracking is found in either stiffener, prior to further flight, repair that stiffener in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) Except as required by paragraph (a)(2) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 737-57-1253, dated December 16, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on May 9, 2000.

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FOR FURTHER INFORMATION CONTACT:

Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2557; fax (425) 227-1181.

Issued in Renton, Washington, on April 14, 2000.

Charles D. Huber, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**GENERAL ELECTRIC COMPANY
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-08-10 GENERAL ELECTRIC COMPANY: Amendment 39-11696. Docket No. 98-ANE-39-AD. Supersedes AD 99-08-17, Amendment 39-11123.

Applicability: General Electric Company (GE) GE90-76B/ -77B/ -85B/ -90B/ -92B series turbofan engines, installed on but not limited to Boeing 777 series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Inspections

(a) Within the next 30 days after the effective date of this AD, revise the manufacturer's Airworthiness Limitations Section of the Instructions for Continued Airworthiness (ICA), and for air carrier operations revise the approved continuous airworthiness maintenance program, by adding the following:

"MANDATORY INSPECTIONS

(1) Perform inspections of the following parts at each piece-part opportunity in accordance with the instructions provided in the applicable manual provisions:

Part Nomenclature	Part No. (P/N)	Inspect per Engine Manual Chapter
For GE90 Engines:		
HPCR, Disk, Stage 7	All	72-31-07-200-001-001 Fluorescent Penetrant Inspection, and 72-31-07-200-001-001 Eddy Current Inspection of the Rim Boltholes
HPTR, Interstage Seal	All	72-53-03-200-001-001 Fluorescent Penetrant Inspection, and 72-53-03-200-001-001 Eddy Current Inspection of the Bore
Fan Disk, Stage 1	All	72-21-03-200-001-001 Fluorescent Penetrant Inspection, and 72-21-03-200-001-001 Eddy Current Inspection of the Bore, and 72-21-03-200-001-001 Ultrasonic Inspection of Dovetail Slots
HPTR Disk, Stage 1	All	72-53-02-200-001-002 Fluorescent Penetrant Inspection, and 72-53-02-200-001-002 Eddy Current Inspection of the Bore
HPTR Disk, Stage 2	All	72-53-04-200-001-004 Fluorescent Penetrant Inspection, and 72-53-04-200-001-004 Eddy Current Inspection of the Bore
HPCR Disk, Stage 1	All	72-31-05-200-001-001 Fluorescent Penetrant Inspection, and 72-31-05-200-001-001 Eddy Current Inspection of the Bore, and 72-31-05-200-001-001 Eddy Current Inspection of the Dovetail Slots
HPCR Spool, Stage 2-6	All	72-31-06-200-001-001 Fluorescent Penetrant Inspection, and 72-31-06-200-001-001 Eddy Current Inspection of the S2 Dovetail Slots
HPCR Seal, Compressor Discharge Pressure	All	72-31-09-200-001-001 Fluorescent Penetrant Inspection, and 72-31-09-200-001-001 Eddy Current Inspection of the Boltholes

(2) For the purposes of these mandatory inspections, piece-part opportunity means:

(i) The part is considered completely disassembled when accomplished in accordance with the disassembly instructions in the manufacturer's engine manual; and

(ii) The part has accumulated more than 100 cycles in service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine."

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the Airworthiness Limitations Section of the manufacturer's ICA.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector (PMI), who may add comments and then send it to the ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Ferry Flights

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)] must maintain records of the mandatory inspections that result from revising the Airworthiness Limitations Section of the Instructions for Continuous Airworthiness (ICA) and the air carrier's continuous airworthiness program. Alternately, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)]; however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations [14 CFR 121.380 (a) (2) (vi)]. All other Operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Note 3: The requirements of this AD have been met when the engine manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the requirements in the engine manuals.

(f) This amendment becomes effective on October 23, 2000.

FOR FURTHER INFORMATION CONTACT:

Karen Curtis, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7134, fax (781) 238-7199.

Issued in Burlington, Massachusetts, on April 14, 2000.

Jay J. Pardee, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

**GENERAL ELECTRIC COMPANY
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-08-11 GENERAL ELECTRIC COMPANY: Amendment 39-11697. Docket No. 98-ANE-41-AD. Supersedes AD 99-08-18, Amendment 39-11124.

Applicable Engines

General Electric Company (GE) CF6-6, CF6-45, and CF6-50 series turbofan engines, installed on but not limited to Airbus Industrie A300 series, Boeing 747 series, and McDonnell Douglas DC-10 series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Required as indicated, unless accomplished previously.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Inspections

(a) Within the next 30 days after the effective date of this AD, revise the manufacturer's Time Limitations Section of the Instructions for Continued Airworthiness (ICA), and for air carrier operations revise the approved continuous airworthiness maintenance program, by adding the following:

" MANDATORY INSPECTIONS

(1) Perform inspections of the following parts at each piece-part opportunity in accordance with the instructions provided in the applicable manual provisions:

Part Nomenclature	Part number (P/N)	Inspect per Engine Shop Manual Chapter
For CF6-6 Engines:		
Disk, Fan Rotor Stage One	All	72-21-03 Paragraph 2.F. or Paragraph 2.A.B. Fluorescent-Penetrant Inspect, and 72-21-03 Paragraph 3 or 3.A. Eddy Current Inspection
Disk, HPT Rotor Stage One	All	72-53-03 Paragraph 1. Fluorescent-Penetrant Inspect, and 72-53-03 Paragraph 4. Eddy Current Inspection of the HPTR Disk Rim Boltholes and 72-53-03 Paragraph 5. Disk Bore Area Eddy Current Inspection
Disk, HPT Rotor Stage Two	All	72-53-04 Paragraph 1. Fluorescent-Penetrant Inspect, and Paragraph 4. Eddy Current Inspection of the Stage 2 HPTR Disk Rim Boltholes and 72-53-04 Paragraph 5. Eddy Current Inspection of the Stage 2 Disk Inner Boltholes and 72-53-04 Paragraph 6. Disk Bore Area Eddy Current Inspection

Part Nomenclature	Part number (P/N)	Inspect per Engine Shop Manual Chapter
For CF6-45, CF6-50 Engines:		
Disk, Fan Rotor Stage One	All	Task 72-21-03-230-051 Fluorescent Penetrant Inspection, and Task 72-21-03-250-002-052 Manual Eddy Current Inspection or 72-21-03-250-003-053 Automated Eddy Current Inspection
Disk, HPT Rotor Stage One	All	Task 72-53-03-230-001-059 Fluorescent-Penetrant Inspect Disk, and Task 72-53-03-250-052 Eddy Current Inspection of the HPTR Stage 1 Rim Boltholes, and Task 72-53-03-250-060, Disk Bore Area Eddy Current Inspection
Disk, HPT Rotor Stage Two	All	Task 72-53-04-230-001-057 Fluorescent-Penetrant Inspect Disk, and Task 72-53-04-250-053 Eddy Current Inspection of the HPTR Stage 2 Rim and/or Inner Boltholes, and Task 72-53-04-250-060, Disk Bore Area Eddy Current Inspection

(2) For the purposes of these mandatory inspections, piece-part opportunity means:

(i) The part is considered completely disassembled when accomplished in accordance with the disassembly instructions in the manufacturer's engine manual; and

(ii) The part has accumulated more than 100 cycles in service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine."

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the Time Limits Section of the manufacturer's ICA.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Ferry Flights

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)] must maintain records of the mandatory inspections that result from revising the Time Limits Section of the ICA and the air carrier's continuous airworthiness program. Alternately, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)]; however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations [14 CFR 121.380 (a) (2) (vi)]. All

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other Operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Note 3: The requirements of this AD have been met when the engine shop manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the requirements in the engine shop manuals.

(f) This amendment becomes effective on October 23, 2000.

FOR FURTHER INFORMATION CONTACT:

Karen Curtis, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7192, fax (781) 238-7199.

Issued in Burlington, Massachusetts, on April 14, 2000.

Jay J. Pardee, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

**GENERAL ELECTRIC COMPANY
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-08-12 GENERAL ELECTRIC COMPANY: Amendment 39-11698. Docket No. 98-ANE-49-AD. Supersedes AD 99-08-13, Amendment 39-11119.

Applicability: General Electric Company (GE) CF6-80A, CF6-80C2, and CF6-80E1 series turbofan engines, installed on but not limited to Airbus Industrie A300, A310, and A330 series, Boeing 747 and 767 series, and McDonnell Douglas MD-11 series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Required as indicated, unless accomplished previously.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Inspections

(a) Within the next 30 days after the effective date of this AD, revise the manufacturer's Life Limits Section of the Instructions for Continued Airworthiness (ICA) for the CF6-80A model and the Airworthiness Limitations Section of the ICA for CF6-80C2/-80E1 models. For air carrier operations, revise the approved continuous airworthiness maintenance program, by adding the following:

"MANDATORY INSPECTIONS

(1) Perform inspections of the following parts at each piece-part opportunity in accordance with the instructions provided in the applicable manual provisions:

Part Nomenclature	Part number (P/N)	Inspect per Engine Manual Chapter
For CF6-80A Engines:		
Disk, Fan Rotor Stage 1	All	72-21-03 Paragraph 3. Fluorescent-Penetrant Inspect, and 72-21-03 Paragraph 4. Eddy Current Inspect
Disk, HPT Rotor Stage One	All	72-53-02 Paragraph 3. Fluorescent-Penetrant-Inspect Disk/Shaft per 70-32-02, and 72-53-02 Paragraph 6. Eddy Current Inspection, and 72-53-02 Paragraph 6.D. Disk Bore Area Eddy Current Inspection
Disk, HPT Rotor Stage Two	All	72-53-06 Paragraph 3. Fluorescent-Penetrant Inspection, and 72-53-06 Paragraph 6. Eddy Current Inspection of Rim Boltholes for Cracks, and 72-53-06 Paragraph 7. Disk Bore Area Eddy Current Inspection

Part Nomenclature	Part number (P/N)	Inspect per Engine Manual Chapter
For CF6-80C2 Engines:		
Disk, Fan Rotor Stage 1	All	Task 72-21-03-200-000-004 Fluorescent-Penetrant Inspection, and Task 72-21-03-200-000-008 Eddy Current Inspect Fan Rotor Disk Stage 1 Bore, Forward and Aft Hub Faces, and Bore Radii
Shaft, Fan Forward	All	Task 72-21-05-200-000-001 Fluorescent Penetrant Inspection, and Task 72-21-05-200-000-005 Vent Hole Eddy Current Inspection
Disk, HPT Rotor Stage One	All	Task 72-53-02-200-000-001 Fluorescent-Penetrant Inspect the HPT Rotor Stage 1 Disk/Shaft, and Task 72-53-02-200-000-005 Eddy Current Inspection, and Task 72-53-02-200-000-006 Disk Bore Area Eddy Current Inspection
Disk, HPT Rotor Stage Two	All	Task 72-53-06-200-000-002 Fluorescent-Penetrant Inspect the Stage 2 Disk, and Task 72-53-06-200-000-006 Eddy Current Inspection of the HPTR Stage 2 Rim Boltholes, and Task 72-53-06-200-000-007 Disk Bore Area Eddy Current Inspection
For CF6-80E1 Engines:		
Disk, Fan Rotor Stage One	All	Task 72-21-03-230-051 Fluorescent-Penetrant Inspection, and Task 72-21-03-250-051 or 72-21-03-250-052 Eddy Current Inspection
Shaft, Fan Forward	All	Task 72-21-05-230-051 Fluorescent Penetrant Inspection, and Task 72-21-05-250-051 Vent Hole Eddy Current Inspection
HPT Disk Stage One	All	Task 72-53-02-230-51 Fluorescent-Penetrant Inspection, and Task 72-53-02-200-001-005 Eddy Current Inspection, and Task 72-53-02-250-054 Disk Bore Area Eddy Current Inspection
HPT Disk Stage Two	All	Task 72-53-06-230-051 Fluorescent-Penetrant Inspection, and Task 72-53-06-200-001-006 Eddy Current Inspection of the HPTR Stage 2 Rim Boltholes, and Task 72-53-06-250-054 Disk Bore Area Eddy Current Inspection

(2) For the purposes of these mandatory inspections, piece-part opportunity means:

- (i) The part is considered completely disassembled when accomplished in accordance with the disassembly instructions in the manufacturer's engine manual; and
- (ii) The part has accumulated more than 100 cycles in service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine."

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the Life Limits Section of the Instructions for Continued Airworthiness (ICA) for the CF6-80A model and the Airworthiness Limitations Section of the ICA for CF6-80C2/-80E1 models.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector (PMI), who may add comments and then send it to the ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Ferry Flights

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)] must maintain records of the mandatory inspections that result from revising the Life Limits Section of the Instructions for Continued Airworthiness (ICA) for the CF6-80A model and the Airworthiness Limitations Section of the ICA for CF6-80C2/-80E1 models and the air carrier's continuous airworthiness program. Alternately, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)]; however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations [14 CFR 121.380 (a) (2) (vi)]. All other Operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Note 3: The requirements of this AD have been met when the engine manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the requirements in the engine manuals.

(f) This amendment becomes effective on October 23, 2000.

FOR FURTHER INFORMATION CONTACT:

Karen Curtis, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7192, fax (781) 238-7199.

Issued in Burlington, Massachusetts, on April 14, 2000.

Jay J. Pardee, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

**LEARJET
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-13 LEARJET: Amendment 39-11699. Docket 2000-NM-85-AD.

Applicability: Model 45 airplanes on which Crane Hydro-Aire brake control unit part number (P/N) 42-933-2 is installed; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To provide the flight crew with procedures to detect an uncommanded brake application condition during taxi and takeoff, which could result in a possible wheel/brake fire and/or a high-speed rejected takeoff, accomplish the following:

Airplane Flight Manual (AFM) Revision

(a) Within 10 days after the effective date of this AD, revise the Limitations and Normal Procedures Sections of the FAA-approved AFM to include Learjet Temporary Flight Manual (TFM) Changes 2000-01, 2000-02, 2000-03, 2000-04, 2000-05, 2000-06, 2000-07, and 2000-08, each dated April 6, 2000.

NOTE 1: The AFM revision required by paragraph (a) of this AD may be accomplished by inserting a copy of the applicable TFM Change into the applicable section of the AFM. When these TFM Changes have been incorporated into the general revisions of the AFM, the general revisions may be inserted into the AFM, provided that the information contained in the general revisions is identical to that specified in the TFM Changes.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Wichita Aircraft Certification Office (ACO), FAA, Small Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Operations Inspector, who may add comments and then send it to the Manager, Wichita ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) The Airplane Flight Manual revisions shall be done in accordance with Learjet Temporary Flight Manual Change 2000-01, dated April 6, 2000; Learjet Temporary Flight Manual Change 2000-02, dated April 6, 2000; Learjet Temporary Flight Manual Change 2000-03, dated April 6, 2000; Learjet Temporary Flight Manual Change 2000-04, dated April 6, 2000; Learjet Temporary Flight Manual Change 2000-05, dated April 6, 2000; Learjet Temporary Flight Manual Change 2000-06, dated April 6, 2000; Learjet Temporary Flight Manual Change 2000-07, dated April 6, 2000; and Learjet Temporary Flight Manual Changes 2000-08, dated April 6, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier Aerospace, Learjet, One Learjet Way, Wichita, Kansas 67277-7707. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at Small Airplane Directorate, Wichita Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on May 15, 2000.

2000-08-13

FOR FURTHER INFORMATION CONTACT:

Shane Bertish, Aerospace Engineer, Systems and Equipment Branch, ACE-116W, FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4156; fax (316) 946-4407.

Issued in Renton, Washington, on April 17, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-14 BOEING: Amendment 39-11700. Docket 99-NM-56-AD.

Applicability: Model 747 series airplanes, as listed in Boeing Service Bulletin 747-57A2309, Revision 1, dated December 22, 1999, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent cracking of the high strength H-11 steel bolts on the wing rear spar side-of-body on the lower chord splice plate and kick fitting due to stress corrosion, which could result in reduced structural integrity of the wing-to-body joint structure, accomplish the following:

Repetitive Inspections

(a) Within 12 months after the effective date of this AD, perform a detailed visual inspection, or alternatively, an ultrasonic inspection or torque check, to detect broken H-11 steel bolts common to the rear spar lower chord splice plate and the H-11 steel bolts common to the wing rear spar lower chord kick fitting, in accordance with Boeing Alert Service Bulletin 747-57A2309, dated February 25, 1999, or Boeing Service Bulletin 747-57A2309, Revision 1, dated December 22, 1999. Thereafter, repeat the applicable inspection or torque check at intervals not to exceed 18 months, until accomplishment of the actions specified in paragraph (d) of this AD.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc. may be used. Surface cleaning and elaborate access procedures may be required."

Corrective Actions

(b) If there is any detection or indication that any bolt is broken during the inspection required by paragraph (a) of this AD, prior to further flight, perform the applicable corrective action [i.e., ultrasonic inspection, torque check, high frequency eddy current (HFEC) inspection, repair, and replacement] in accordance with Boeing Alert Service Bulletin 747-57A2309, dated February 25, 1999, or Boeing Service Bulletin 747-57A2309, Revision 1, dated December 22, 1999, except as provided in paragraph (c) of this AD. Replacement of a broken bolt with a new Inconel bolt in accordance with the service bulletin constitutes terminating action for the repetitive inspection requirements of paragraph (a) of this AD for that bolt only.

(c) If any crack is detected during any corrective action required by paragraph (b) of this AD, or during the terminating action required by paragraph (d)(1) of this AD, and the service bulletin specifies to contact Boeing for appropriate action: Prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Terminating Action

(d) Within 48 months after the effective date of this AD, accomplish the actions required by paragraphs (d)(1) and (d)(2) of this AD in accordance with Boeing Alert Service Bulletin 747-57A2309, dated February 25, 1999, or Boeing Service Bulletin 747-57A2309, Revision 1, dated December 22, 1999. Accomplishment of the actions specified in this paragraph constitutes terminating action for the repetitive inspection requirements of this AD.

(1) Prior to accomplishing the replacement required by paragraph (d)(2) of this AD, perform an open hole HFEC inspection to detect cracks at the bolt hole location for all high strength H-11 steel bolts common to the rear spar lower chord splice plate and all high strength H-11 steel bolts common to the wing rear spar lower chord kick fitting. If any crack is detected, prior to further flight, perform applicable corrective actions in accordance with paragraph (c) of this AD.

(2) Replace all high strength H-11 steel bolts common to the rear spar lower chord splice plate and all high strength H-11 steel bolts common to the wing rear spar lower chord kick fitting with new Inconel bolts.

Spares

(e) As of the effective date of this AD, no person shall install an H-11 steel bolt having part number (P/N) BACB30MT () * () or BACB30TR () * (), or any other H-11 steel bolt, in the locations specified in this AD, on any airplane.

Alternative Methods of Compliance

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(h) Except as provided by paragraph (c) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-57A2309, including Appendix A, dated February 25, 1999, or Boeing Service Bulletin 747-57A2309, Revision 1, including Appendix A, dated December 22, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P. O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on June 1, 2000.

FOR FURTHER INFORMATION CONTACT:

Tamara L. Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

Issued in Renton, Washington, on April 18, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-15 BOEING: Amendment 39-11701. Docket 99-NM-346-AD.

Applicability: Model 777 series airplanes having line numbers 1 through 119 inclusive, except line numbers 94, 102, 104, and 118; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue cracking of the upper wing skin, which could result in reduced structural integrity of the wing, accomplish the following:

Eddy Current Inspection of Fastener Holes

(a) Prior to the accumulation of 16,000 total flight cycles or 40,000 total flight hours, whichever occurs earlier, perform a one-time eddy current inspection to detect cracking of the fastener holes common to the upper wing skins and trailing edge panels of both wings, in accordance with Boeing Alert Service Bulletin 777-57A0022, dated August 26, 1999.

Rework and Re-Inspection of Fastener Hole

(b) If any cracking is detected during the inspection required by paragraph (a) of this AD, prior to further flight, oversize the fastener hole and perform additional eddy current inspections to detect cracking of the fastener holes until all cracking is no longer detectable by means of eddy current inspection. Perform the actions in accordance with Boeing Alert Service Bulletin 777-57A0022, dated August 26, 1999. Prior to further flight, oversize the fastener hole an additional 1/32-inch minimum and measure the starting hole diameter and edge margin of the fastener hole, in accordance with the alert service bulletin.

(1) If the fastener hole diameter or the edge margin of any fastener hole is not within the limits specified in the alert service bulletin, prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate, or a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

(2) If the fastener hole diameter and edge margin of all the fastener holes are within the limits specified in the alert service bulletin, prior to further flight, accomplish the requirements of paragraph (c) of this AD.

Coldwork of Fastener Holes

(c) If no cracking is detected during the eddy current inspection required by paragraph (a), or the fastener hole diameter and edge margin of all the fastener holes are within the limits required by paragraph (b) of this AD, prior to further flight, coldwork the fastener holes and install new or serviceable fasteners, in accordance with Boeing Alert Service Bulletin 777-57A0022, dated August 26, 1999.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (b)(1) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 777-57A0022, dated August 26, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on May 31, 2000.

FOR FURTHER INFORMATION CONTACT:

Stan Wood, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2772; fax (425) 227-1181.

Issued in Renton, Washington, on April 18, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-17 BOEING: Amendment 39-11703. Docket 98-NM-253-AD.

Applicability: Model 737-100, -200, -300, -400, and -500 series airplanes; that are not equipped with a Grimes Aerospace taxi light assembly having part number (P/N) 50-0199-9, 50-0199-11, 50-0128-1A, 50-0128-1MA, 50-0128-3A, or 50-0128-3MA; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent damage to the taxi light assembly, which could result in detachment of the taxi light from the airplane, ingestion of taxi light debris into an engine, and consequent loss of thrust from one or both engines; accomplish the following:

Initial and Repetitive Inspections

(a) Within 60 days after the effective date of this AD, perform a detailed visual inspection to detect damage (including cracking, corrosion, deformation, or evidence of impact) of the taxi light assembly mounted on the nose landing gear of the airplane. Repeat the inspection thereafter at intervals not to exceed 1 day, until the requirements of paragraph (c) have been accomplished.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as an intensive visual inspection of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of lighting at an intensity deemed appropriate by the inspector (i.e., the person performing the inspection). Inspection aids such as mirrors, magnifying glasses, etc., may be used. Surface cleaning and elaborate access procedures may be necessary.

Replacement

(b) If any damage of the taxi light assembly is detected during any inspection performed in accordance with paragraph (a) of this AD, prior to further flight, replace the existing taxi light assembly with a new or serviceable taxi light assembly in accordance with the applicable maintenance manual. If the existing taxi light assembly is replaced with a Grimes Aerospace taxi light assembly having P/N 50-0199-9, 50-0199-11, 50-0128-1A, 50-0128-1MA, 50-0128-3A, or 50-0128-3MA: no further action is required by this AD.

Terminating Action

(c) Within 2 years after the effective date of this AD: Replace the existing taxi light assembly with a Grimes Aerospace taxi light assembly having P/N 50-0199-9, 50-0199-11, 50-0128-1A, 50-0128-1MA, 50-0128-3A, or 50-0128-3MA; in accordance with the applicable maintenance manual. Such replacement constitutes terminating action for the repetitive inspection requirement of paragraph (a) of this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

2000-08-17

Effective Date

(f) This amendment becomes effective on May 31, 2000.

FOR FURTHER INFORMATION CONTACT:

David Herron, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2672; fax (425) 227-1181.

Issued in Renton, Washington, on April 19, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-19 BOEING: Amendment 39-11705. Docket 98-NM-293-AD.

Applicability: Model 727 and 727C series airplanes, line numbers 153, 290, and 339 inclusive; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue cracking of the body skin at the forward corners of the mid-galley door hinge cutouts, which could result in reduced structural integrity of the fuselage and consequent loss of cabin pressurization, accomplish the following:

One-Time Inspections

(a) Prior to the accumulation of 60,000 total flight cycles, or within 3,000 flight cycles after the effective date of this AD, whichever occurs later, perform a one-time detailed visual inspection and a high frequency eddy current inspection of the exterior body skin located adjacent to the forward corners of the mid-galley door hinge cutouts for cracking in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate by the inspector. Inspection aids such as mirrors, magnifying lenses, etc. may be used. Surface cleaning and elaborate access procedures may be required."

Repairs and Modification

(1) If no cracking is found during any inspection, prior to further flight, modify the body skin at the forward corners of the mid-galley door hinge cutouts, in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989. No further action is required by this AD.

(2) If any cracking is found during any inspection, prior to further flight, accomplish the requirements of either paragraph (a)(2)(i) or (a)(2)(ii) of this AD, as applicable.

(i) If any crack is less than or equal to 1.00 inch, accomplish the repair and modification in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989. No further action is required by this AD.

(ii) If any crack is greater than 1.00 inch, accomplish the repair and modification in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD. No further action is required by this AD.

NOTE 3: Accomplishment of the actions required by AD 90-06-09, amendment 39-6488, is considered acceptable for compliance with this AD.

Alternative Method of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) Except as provided by paragraph (a)(2)(ii) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(e) This amendment becomes effective on June 5, 2000.

FOR FURTHER INFORMATION CONTACT:

Walter Sippel, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2774; fax (425) 227-1181.

Issued in Renton, Washington, on April 19, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**LOCKHEED
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-20 LOCKHEED: Amendment 39-11706. Docket 99-NM-221-AD.

Applicability: Model L-1011-385-1, -1-14, -1-15, and -3 series airplanes, equipped with high pressure bleed valve controller Hamilton Standard part number (P/N) 739084-2 or 739084-3 (Lockheed P/N 672286-103 or 672286-105); certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failures of the bleed air system components, which could result in high temperature air leaking into the cabin and/or cargo areas and could possibly require an emergency landing and evacuation, accomplish the following:

(a) Within 14 months after the effective date of this AD, modify the high pressure bleed valve controller of each engine in accordance with Lockheed Service Bulletin 093-36-065, dated February 9, 1999.

NOTE 2: Lockheed Service Bulletin 093-36-065, dated February 9, 1999, references Hamilton Standard Service Bulletin 36-1060, Revision 1, dated March 1, 1977, as an additional source of service information for the modification of the high pressure bleed valve controller of each engine.

(b) As of the effective date of this AD, no person shall install on any airplane a high pressure bleed valve controller having Hamilton Standard part number (P/N) 739084-2 or 739084-3 (Lockheed P/N 672286-103 or 672286-105), unless it has been modified in accordance with this AD.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA, Small Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Lockheed Service Bulletin 093-36-065, dated February 9, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Lockheed Martin Aircraft & Logistics Center, 120 Orion Street, Greenville, South Carolina 29605. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Small Airplane Directorate, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on June 5, 2000.

2000-08-20

FOR FURTHER INFORMATION CONTACT: Thomas Peters, Aerospace Engineer, Systems and Flight Test Branch, ACE-116A, FAA, Small Airplane Directorate, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6063; fax (770) 703-6097.

Issued in Renton, Washington, on April 19, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-08-21 BOEING: Amendment 39-11707. Docket 99-NM-231-AD.

Applicability: All Model 747 series airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct cracking of the forward and aft inner chords and the splice fitting of the forward inner chord of the station 2598 bulkhead, which could result in reduced structural capability of the bulkhead and the inability of the structure to carry horizontal stabilizer flight loads, accomplish the following:

Initial Inspection

(a) Prior to the accumulation of 13,000 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever occurs later: Accomplish the requirements specified in paragraphs (a)(1) and (a)(2) of this AD.

(1) Perform a high frequency eddy current inspection (HFEC) to detect cracking of the forward and aft inner chords of the station 2598 bulkhead, in accordance with Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998; or in accordance with Figure 2, Steps 1 and 2, of Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999.

(2) Perform an HFEC inspection to detect cracking of the splice fitting along the upper and lower attachment to the forward inner chord of the station 2598 bulkhead, as shown in Figure 2, Detail A, of Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998; or in accordance with Figure 2, Step 3, of Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999.

NOTE 2: Operators should note that although the splice fitting is NOT highlighted in Figure 2, Detail A, of Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998, as it is in Figure 2 of Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999, the inspection required by paragraph (a)(2) of this AD must still be accomplished.

Repetitive Inspections

(b) Within 3,000 flight cycles after accomplishment of the inspections required by paragraph (a) of this AD: Accomplish the inspections specified in paragraphs (b)(1) and (b)(2) of this AD. Repeat the inspection thereafter at intervals not to exceed 3,000 flight cycles.

(1) Perform a detailed visual inspection to detect cracking of the forward and aft inner chords of the station 2598 bulkhead, in accordance with Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998; or in accordance with Figure 3, Steps 1 and 2, of Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999.

NOTE 3: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(2) Perform a detailed visual inspection to detect cracking of the splice fitting along the upper and lower attachment to the forward inner chord of the station 2598 bulkhead, as shown in Figure 3, Detail A, of Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998; or in accordance with Figure 3, Step 3, of Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999.

NOTE 4: Operators should note that although the splice fitting is NOT highlighted in Figure 3, Detail A, of Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998, as it is in Figure 3 of

Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999, the inspections required by paragraph (b)(2) of this AD must still be accomplished.

Repair

(c) If any cracking is detected during the inspections required by paragraph (a)(1) or (b)(1) of this AD, prior to further flight, repair in accordance with Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998, or Revision 1, dated October 28, 1999; except as provided by paragraph (d) of this AD.

(d) If any cracking is detected during the inspections required by paragraph (a)(2) or (b)(2) of this AD, or where the alert service bulletin specifies that the manufacturer may be contacted for disposition of certain repair conditions, prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, or a Boeing DER, as required by this paragraph, the approval letter must specifically reference this AD.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) Except as provided by paragraph (d) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-53A2427, dated December 17, 1998, or Boeing Alert Service Bulletin 747-53A2427, Revision 1, dated October 28, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective on June 5, 2000.

FOR FURTHER INFORMATION CONTACT:

Rick Kawaguchi, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1153; fax (425) 227-1181.

Issued in Renton, Washington, on April 19, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-09-01 MCDONNELL DOUGLAS: Amendment 39-11709. Docket 99-NM-338-AD. Supersedes AD 93-20-02, Amendment 39-8709.

Applicability: Model DC-8 series airplanes that have been converted from a passenger to a cargo-carrying ("freighter") configuration in accordance with Supplemental Type Certificate (STC) SA1802SO or SA421NW; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent opening of the cargo door while the airplane is in flight, and consequent rapid decompression of the airplane including possible loss of the door, flight control, or severe structural damage, accomplish the following:

RESTATEMENT OF REQUIREMENTS OF AD 93-20-02

Actions Addressing the Main Deck Cargo Door

(a) Within 7 days after January 21, 1992 (the effective date of AD 92-02-05, amendment 39-8141), and thereafter at intervals not to exceed 100 hours time-in-service, perform the following inspections:

(1) Inspect the cargo door wire bundle between the exit point of the cargo liner and the attachment point on the cargo door to detect crimped, frayed, or chafed wires; and inspect for damaged, loose, or missing hardware mounting components. Prior to further flight, repair any damaged wiring or hardware mounting components in accordance with FAA-approved maintenance procedures.

(2) Inspect the cargo door latch rollers in the lower sill of the cargo door opening of the airplane to ensure that all twelve rollers can be freely rotated by hand. Prior to further flight, replace any discrepant roller components found, and repair any rollers that cannot be rotated freely by hand, in accordance with FAA-approved maintenance procedures.

(b) Within 7 days after November 17, 1993 (the effective date of AD 93-20-02, amendment 39-8709), revise the Limitations Section of the appropriate FAA-approved Airplane Flight Manual Supplement (AFMS) by replacing item 5 in the AFMS for SA1802SO, and item 6 in the AFMS for SA421NW, with the following. (This may be accomplished by inserting a copy of this AD into the AFMS.)

"Prior to initiating the cargo door closing sequence, a flight crew member must verify that the cargo door warning light is illuminated. After the door closing sequence is complete, and visual verification has been made that the latches are closed and the lockpins are properly engaged, a flight crew member must verify that the cargo door warning light is extinguished, and then conduct a PRESS-TO-TEST of the warning light to ensure that the light is operational. Pull the cargo door circuit breakers labeled "pump" and "valve" prior to takeoff. Methods for documentation of compliance with the preceding procedures must be approved by the FAA Principal Maintenance Inspector (PMI)."

NEW REQUIREMENTS OF THIS AD

Actions Addressing the Main Deck Cargo Door Powered Lock Systems

(c) Except as provided by paragraph (f) of this AD, within 30 days after the effective date of this AD, unless previously accomplished within the last 18 months prior to the effective date of this AD, replace the circuit breakers of the main deck cargo door labeled "pump" and "valve" with new circuit breakers.

Actions Addressing the Main Deck Cargo Door Hydraulic Systems

(d) Within 18 months after the effective date of this AD, modify the mechanical and hydraulic systems of the main deck cargo door, in accordance with National Aircraft Services, Inc. (NASI) Service Bulletin SB-99-01, Revision A, dated October 15, 1999.

Actions Addressing the Main Deck Cargo Door Indication System

(e) Within 18 months after the effective date of this AD, modify the indication system of the main deck cargo door to indicate to the pilots whether the main deck cargo door is closed, latched, and locked; install a means to visually inspect the locking mechanism of the main deck cargo door; install a means to remove power to the door while the airplane is in flight; and install a means to prevent pressurization to an unsafe level if the main deck cargo door is not closed, latched, and locked; in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

NOTE 2: Installation of NASI Vent Door System STC ST01116CH, is an approved means of compliance with the requirements of paragraph (e) of this AD.

(f) Compliance with both paragraphs (d) and (e) of this AD constitutes terminating action for the requirements of both paragraphs (a) and (b) of this AD, and the AFMS revision required by paragraph (b) of this AD may be removed. Compliance with paragraph (e) of this AD within 30 days after the effective date of this AD eliminates the requirement to comply with paragraph (c) of this AD.

Alternative Methods of Compliance

(g) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

(2) Alternative methods of compliance to paragraph (a) of AD 93-20-02, amendment 39-8709, approved previously in accordance with that AD, are approved as alternative methods of compliance with only paragraph (a) of this AD.

(3) Alternative methods of compliance to paragraph (b) of AD 93-20-02, amendment 39-8709, approved previously in accordance with that AD, are approved as alternative methods of compliance with only paragraph (b) of this AD.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) The modification required by paragraph (d) of this AD shall be done in accordance with National Aircraft Services, Inc. (NASI) Service Bulletin SB-99-01, Revision A, dated October 15, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from National Aircraft Service, Inc. (NASI), 9133 Tecumseh-Clinton Road, Tecumseh, MI 49286. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(j) This amendment becomes effective on June 7, 2000.

FOR FURTHER INFORMATION CONTACT:

Michael E. O'Neil, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5320; fax (562) 627-5210.

Issued in Renton, Washington, on April 24, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

APPENDIX 1

Excerpt from an FAA Memorandum to Director-Airworthiness and Technical Standards of ATA, dated March 20, 1992

“(1) Indication System:

(a) The indication system must monitor the closed, latched, and locked positions, directly.
(b) The indicator should be amber unless it concerns an outward opening door whose opening during takeoff could present an immediate hazard to the airplane. In that case the indicator must be red and located in plain view in front of the pilots. An aural warning is also advisable. A display on the master caution/warning system is also acceptable as an indicator. For the purpose of complying with this paragraph, an immediate hazard is defined as significant reduction in controllability, structural damage, or impact with other structures, engines, or controls.

(c) Loss of indication or a false indication of a closed, latched, and locked condition must be improbable.

(d) A warning indication must be provided at the door operators station that monitors the door latched and locked conditions directly, unless the operator has a visual indication that the door is fully closed and locked. For example, a vent door that monitors the door locks and can be seen from the operators station would meet this requirement.

(2) Means to Visually Inspect the Locking Mechanism:

There must be a visual means of directly inspecting the locks. Where all locks are tied to a common lock shaft, a means of inspecting the locks at each end may be sufficient to meet this requirement provided no failure condition in the lock shaft would go undetected when viewing the end locks. Viewing latches may be used as an alternate to viewing locks on some installations where there are other compensating features.

(3) Means to Prevent Pressurization:

All doors must have provisions to prevent initiation of pressurization of the airplane to an unsafe level, if the door is not fully closed, latched and locked.

(4) Lock Strength:

Locks must be designed to withstand the maximum output power of the actuators and maximum expected manual operating forces treated as a limit load. Under these conditions, the door must remain closed, latched and locked.

(5) Power Availability:

All power to the door must be removed in flight and it must not be possible for the flight crew to restore power to the door while in flight.

(6) Powered Lock Systems:

For doors that have powered lock systems, it must be shown by safety analysis that inadvertent opening of the door after it is fully closed, latched and locked, is extremely improbable.”

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-09-02 MCDONNELL DOUGLAS: Amendment 39-11710. Docket 2000-NM-01-AD.

Applicability: Model DC-8 series airplanes that have been converted from a passenger to a cargo-carrying ("freighter") configuration in accordance with Supplemental Type Certificate (STC) SA1832SO; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent opening of the cargo door while the airplane is in flight, and consequent rapid decompression of the airplane including possible loss of flight control or severe structural damage, accomplish the following:

Actions Addressing the Main Deck Cargo Door

(a) Within 60 days after the effective date of this AD, perform a general visual inspection of the wire bundle of the main deck cargo door between the exit point of the cargo liner and the attachment point on the main deck cargo door to detect crimped, frayed, or chafed wires; and perform a general visual inspection for damaged, loose, or missing hardware mounting components. If any crimped, frayed, or chafed wire, or damaged, loose, or missing hardware mounting component is detected, prior to further flight, repair in accordance with FAA-approved maintenance procedures.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(b) Within 60 days after the effective date of this AD, revise the Limitations Section of the appropriate FAA-approved Airplane Flight Manual Supplement (AFMS) for STC SA1832SO by inserting therein procedures to ensure that the main deck cargo door is fully closed, latched, and locked prior to dispatch of the airplane, and install any associated placards. These procedures shall include pulling the three phase circuit breaker for the cargo door hydraulic pump. The AFMS revision procedures and installation of any associated placards shall be accomplished in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

Actions Addressing the Main Deck Cargo Door Systems

(c) Within 18 months after the effective date of this AD, accomplish the actions specified in paragraphs (c)(1), (c)(2), (c)(3), (c)(4), and (c)(5) of this AD in accordance with a method approved by the Manager, Los Angeles ACO.

(1) Modify the indication system of the main deck cargo door to indicate to the pilots whether the main deck cargo door is fully closed, latched, and locked;

(2) Modify the mechanical and hydraulic systems of the main deck cargo door to eliminate detrimental deformation of elements of the door latching and locking mechanism;

(3) Install a means to visually inspect the locking mechanism of the main deck cargo door;

(4) Install a means to remove power to the door while the airplane is in flight; and

(5) Install a means to prevent pressurization to an unsafe level if the main deck cargo door is not fully closed, latched, and locked.

(d) Compliance with paragraphs (c)(1), (c)(2), (c)(3), (c)(4), and (c)(5) of this AD constitutes terminating action for the requirements of paragraphs (a) and (b) of this AD, and the required AFMS revision and placards may be removed.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(g) This amendment becomes effective on June 6, 2000.

FOR FURTHER INFORMATION CONTACT:

Michael E. O'Neil, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5320; fax (562) 627-5210.

Issued in Renton, Washington, on April 24, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

APPENDIX 1

Excerpt from an FAA Memorandum to Director-Airworthiness and Technical Standards of ATA, dated March 20, 1992

“(1) Indication System:

(a) The indication system must monitor the closed, latched, and locked positions, directly.
 (b) The indicator should be amber unless it concerns an outward opening door whose opening during takeoff could present an immediate hazard to the airplane. In that case the indicator must be red and located in plain view in front of the pilots. An aural warning is also advisable. A display on the master caution/warning system is also acceptable as an indicator. For the purpose of complying with this paragraph, an immediate hazard is defined as significant reduction in controllability, structural damage, or impact with other structures, engines, or controls.

(c) Loss of indication or a false indication of a closed, latched, and locked condition must be improbable.

(d) A warning indication must be provided at the door operators station that monitors the door latched and locked conditions directly, unless the operator has a visual indication that the door is fully closed and locked. For example, a vent door that monitors the door locks and can be seen from the operators station would meet this requirement.

(2) Means to Visually Inspect the Locking Mechanism:

There must be a visual means of directly inspecting the locks. Where all locks are tied to a common lock shaft, a means of inspecting the locks at each end may be sufficient to meet this requirement provided no failure condition in the lock shaft would go undetected when viewing the end locks. Viewing latches may be used as an alternate to viewing locks on some installations where there are other compensating features.

(3) Means to Prevent Pressurization:

All doors must have provisions to prevent initiation of pressurization of the airplane to an unsafe level, if the door is not fully closed, latched and locked.

(4) Lock Strength:

Locks must be designed to withstand the maximum output power of the actuators and maximum expected manual operating forces treated as a limit load. Under these conditions, the door must remain closed, latched and locked.

(5) Power Availability:

All power to the door must be removed in flight and it must not be possible for the flight crew to restore power to the door while in flight.

(6) Powered Lock Systems:

For doors that have powered lock systems, it must be shown by safety analysis that inadvertent opening of the door after it is fully closed, latched and locked, is extremely improbable.”

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-09-03 BOEING: Amendment 39-11711. Docket 2000-NM-93-AD. Supersedes AD 2000-02-33, Amendment 39-11551.

Applicability: Model 747-400 series airplanes equipped with General Electric (GE) CF6-80C2 series engines, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight, accomplish the following:

Repetitive Functional Tests

(a) Within 1,000 hours time-in-service after the most recent test of the center drive unit (CDU) cone brake as specified in paragraph (b)(1) of AD 94-15-05, amendment 39-8976; or within 650 hours time-in-service after the effective date of this AD; whichever occurs later: Perform a functional test to detect discrepancies of the CDU cone brake on each thrust reverser as specified in paragraph (a)(1) or (a)(2) of this AD, as applicable.

(1) For Model 747-400 series airplanes equipped with thrust reversers that have NOT been modified in accordance with Boeing Service Bulletin 747-78-2151 or a production equivalent: Perform the test in accordance with Boeing Service Bulletin 747-78A2166, Revision 1, dated October 9, 1997; or the applicable section of paragraph III.A. of the Accomplishment Instructions of Boeing Service Bulletin 747-78A2113, Revision 2, dated June 8, 1995, or Revision 3, dated September 11, 1997. Repeat the test thereafter at intervals not to exceed 650 hours time-in-service.

(2) For Model 747-400 series airplanes equipped with thrust reversers that HAVE been modified in accordance with Boeing Service Bulletin 747-78-2151 or a production equivalent: Perform the test in accordance with Appendix 1 (including Figure 1) of this AD. Repeat the test thereafter at intervals not to exceed 1,000 hours time-in-service.

NOTE 2: Accomplishment of the CDU cone brake test during production in accordance with Production Revision Record (PRR) 80452-102 prior to the effective date of this AD is considered acceptable for compliance with the initial test required by paragraph (a) of this AD.

NOTE 3: Model 747-400 series airplanes, line numbers 1061 and subsequent, equipped with GE CF6-80C2 engines, had a third locking system installed during production in accordance with Production Revision Record (PRR) 80452-102, and were not modified in accordance with Boeing Service Bulletin 747-78-2151 (which is a retrofit action for airplanes having line numbers 700 through 1060 inclusive).

Terminating Action

(b) Accomplishment of the functional test of the CDU cone brake, as specified in paragraph (a) of this AD, constitutes terminating action for the repetitive tests of the CDU cone brake required by paragraph (b)(1) of AD 94-15-05.

Corrective Action

(c) If any functional test required by paragraph (a) of this AD cannot be successfully performed as specified in the referenced service bulletin, or if any discrepancy is detected during any functional test required by paragraph (a) of this AD, accomplish either paragraph (c)(1) or (c)(2) of this AD.

(1) Prior to further flight, repair in accordance with Boeing Service Bulletin 747-78A2166, Revision 1, dated October 9, 1997; or Boeing Service Bulletin 747-78A2113, Revision 2, dated June 8, 1995, or Revision 3, dated September 11, 1997. Or,

(2) The airplane may be operated in accordance with the provisions and limitations specified in the operator's

FAA-approved MEL, provided that no more than one thrust reverser on the airplane is inoperative.

Alternative Methods of Compliance

(d) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

(2) Alternative methods of compliance approved previously in accordance with AD 2000-02-33, Amendment 39-11551, are considered to be approved as alternative methods of compliance with this AD.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished. **Incorporation by Reference**

(f) Except as provided by paragraphs (a)(2) and (c)(2) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-78A2166, Revision 1, dated October 9, 1997; Boeing Service Bulletin 747-78A2113, Revision 2, dated June 8, 1995; and Boeing Service Bulletin 747-78A2113, Revision 3, dated September 11, 1997. This incorporation by reference was previously approved by the Director of the Federal Register as of March 13, 2000 (65 FR 5742, February 7, 2000). Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on May 19, 2000.

FOR FURTHER INFORMATION CONTACT:

Holly Thorson, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1357; fax (425) 227-1181.

Issued in Renton, Washington, on April 26, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

APPENDIX 1.
THRUST REVERSER CDU CONE BRAKE TEST

1. This procedure contains steps to do a check of the holding torque of the CDU cone brake.

2. CDU cone brake check (Figure 1):

A. Prepare to do the check:

- (1) Open the fan cowl panels.
- (2) Pull up on the manual release handle to unlock the electro-mechanical brake.
- (3) Pull the manual brake release lever on the CDU to release the cone brake.

NOTE: This will release the pre-load tension that may occur during a stow cycle.

- (4) Return the manual brake release lever to the locked position to engage the cone brake.
- (5) Remove the two bolts that hold the lockout plate to the CDU and remove the lockout

plate.

- (6) Install a 1/4-inch drive and a dial-type torque wrench into the CDU drive pad.

CAUTION: DO NOT USE MORE THAN 100 POUND-INCHES OF TORQUE WHEN YOU DO THIS CHECK. EXCESSIVE TORQUE WILL DAMAGE THE CDU.

(7) Turn the torque wrench to try to manually extend the translating cowl until you get at least 15 pound-inches.

NOTE: The cone brake prevents movement in the extend direction only. If you try to measure the holding torque in the retract direction, you will get a false reading.

- (8) If the torque is less than 15 pound-inches, you must replace the CDU.
- (9) Reinstall the lockout plate.

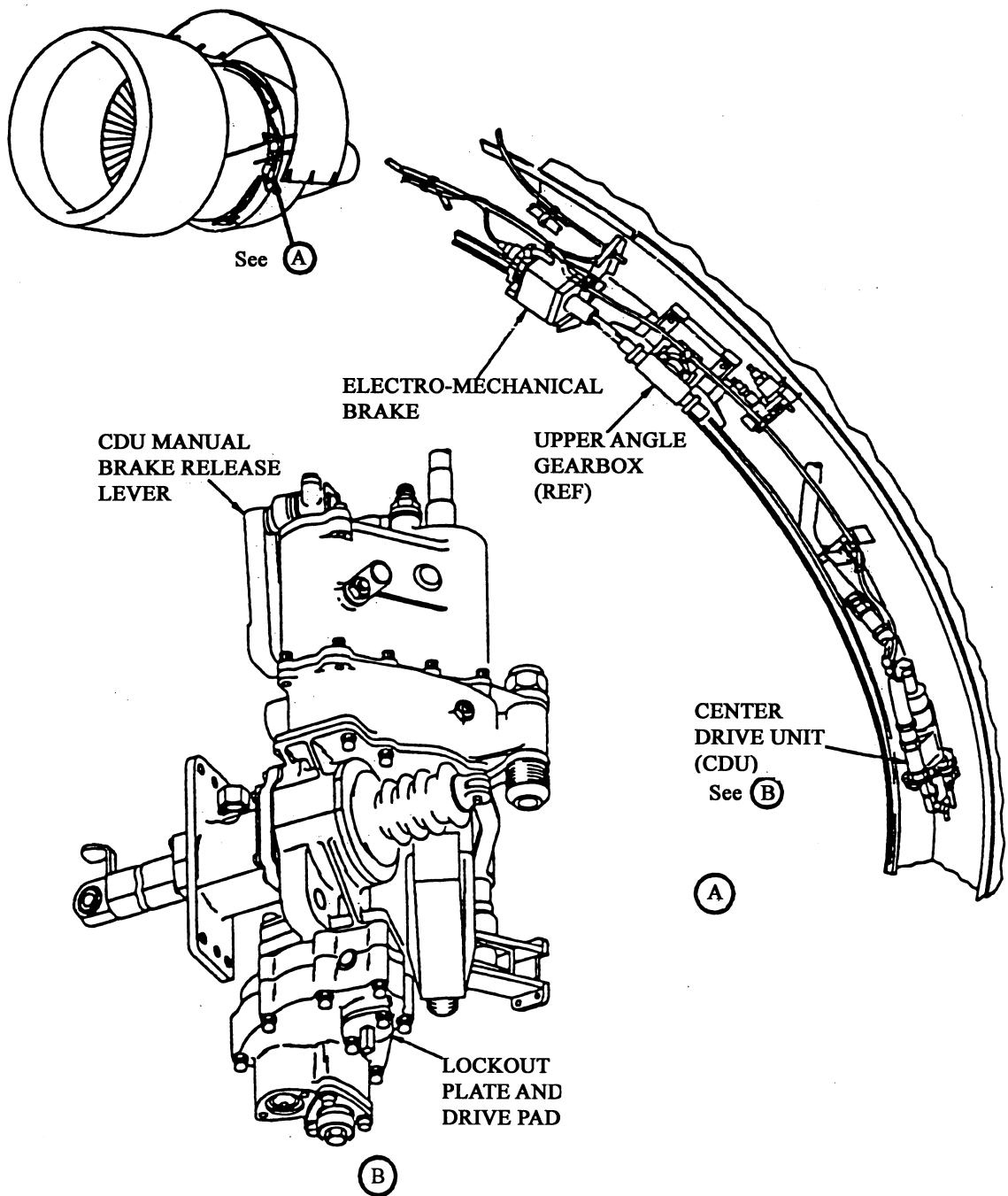
B. Return the airplane to its usual condition:

- (1) Fully retract the thrust reverser (unless already accomplished).
- (2) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip (unless already accomplished).

NOTE: This will lock the electro-mechanical brake.

- (3) Close the fan cowl panels.

Figure 1



Electro-Mechanical Brake and CDU Cone Brake Torque Check

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-09-04 BOEING: Amendment 39-11712. Docket 2000-NM-94-AD. Supersedes AD 2000-02-20, Amendment 39-11538.

Applicability: Model 767 series airplanes equipped with General Electric Model CF6-80C2 series engines, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (i)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight, accomplish the following:

Repetitive Tests, Inspections, and Adjustments

(a) Within 30 days after August 18, 1995 (the effective date of AD 95-13-12 R1, amendment 39-9528), perform tests, inspections, and adjustments of the thrust reverser system in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994.

(1) Except as provided by paragraph (a)(2) of this AD, repeat all tests and inspections thereafter at intervals not to exceed 3,000 flight hours until the modification required by paragraph (c) of this AD is accomplished.

(2) Repeat the check of the grounding wire for the Directional Pilot Valve (DPV) of the thrust reverser in accordance with the service bulletin at intervals not to exceed 1,500 flight hours, and whenever maintenance action is taken that would disturb the DPV grounding circuit, until the modification required by paragraph (c) of this AD is accomplished.

Repair

(b) If any of the tests and/or inspections required by paragraph (a) of this AD cannot be successfully performed, or if those tests and/or inspections result in findings that are unacceptable in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; accomplish paragraphs (b)(1) and (b)(2) of this AD.

(1) Prior to further flight, deactivate the associated thrust reverser in accordance with Section 78-31-1 of Boeing Document D630T002, "Boeing 767 Dispatch Deviation Guide," Revision 9, dated May 1, 1991; or Revision 10, dated September 1, 1992. After August 18, 1995, this action shall be accomplished only in accordance with Revision 10 of the Boeing document. No more than one reverser on any airplane may be deactivated under the provisions of this paragraph.

(2) Within 10 days after deactivation of any thrust reverser in accordance with this paragraph, the thrust reverser must be repaired in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994. Additionally, the tests and/or inspections required by paragraph (a) of this AD must be successfully accomplished; once this is accomplished, the thrust reverser must then be reactivated.

Modification

(c) For airplanes having line numbers 1 through 474 inclusive: Within 3 years after August 18, 1995, install a third locking system on the left- and right-hand engine thrust reversers in accordance with Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994.

NOTE 2: Model 767 series airplanes equipped with General Electric Model CF6-80C2 series engines and having line numbers 475 and subsequent, on which Production Revision Record (PRR) B11481-70 (which installs a third locking system on the left- and right-hand engine thrust reversers) has been incorporated, need NOT be modified in accordance with Boeing Service Bulletin 767-78-0063, Revision 2.

NOTE 3: Boeing Service Bulletin 767-78-0063, references General Electric (GE) Service Bulletin 78-135 as an additional source of service information for accomplishment of the third locking system on the thrust reversers. However, the Boeing service bulletin does not specify the appropriate revision level, and the GE service bulletin has a new Lockheed Martin title for the same service bulletin: Lockheed Martin Service Bulletin 78-135, Revision 4, dated September 30, 1996. The appropriate revision level for the GE Service Bulletin is Revision 3, dated August 2, 1994. The GE and Lockheed Martin service bulletins are identical, and either may be used for accomplishment of the action described previously.

NOTE 4: The actions specified in Lockheed Martin Service Bulletin 78-1007, Revision 1, dated March 18, 1997; and Lockheed Martin Service Bulletin 78-1020, Revision 2, dated March 20, 1997; may be accomplished simultaneously

in conjunction with Boeing Service Bulletin 767-78-0063 for accomplishment of the installation of the thrust reverser bracket and the thrust reverser lock. (Accomplishment of these two service bulletins together achieves the same results as Lockheed Martin Service Bulletin 78-135, Revision 4, and is acceptable for compliance with Boeing Service Bulletin 767-78-0063.)

Repetitive Tests and Checks

(d) Perform a functional test to detect discrepancies of the cone brake of the center drive unit (CDU) on each thrust reverser, as specified in paragraph (d)(1) or (d)(2) of this AD, as applicable.

(1) For airplanes on which the modification required by paragraph (c) of this AD or a production equivalent has NOT been accomplished: Within 650 flight hours after the effective date of this AD, perform the test in accordance with Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997.

(2) For airplanes on which the modification required by paragraph (c) of this AD or a production equivalent has been accomplished: Perform the test in accordance with Appendix 1 (including Figure 1), sections 1.A.(2), 2.A., 2.C., and 2.D; of this AD. Accomplish the test at the time specified in paragraph (d)(2)(i) or (d)(2)(ii) of this AD, as applicable.

(i) For airplanes on which the test required by paragraph (d) of AD 95-13-12 R1 HAS been accomplished prior to the effective date of this AD: Accomplish the functional test within 1,000 flight hours after the most recent test of the CDU cone brake performed in accordance with paragraph (d) of AD 95-13-12 R1, or within 650 flight hours after the effective date of this AD, whichever occurs later.

(ii) For airplanes on which the test required by paragraph (d) of AD 95-13-12 R1 has NOT been accomplished prior to the effective date of this AD: Accomplish the functional test within 1,000 flight hours since the date of manufacture, or within 650 flight hours after the effective date of this AD, whichever occurs later.

(e) Repeat the functional test of the CDU cone brake specified in paragraph (d) of this AD at the time specified in paragraph (e)(1) or (e)(2) of this AD, as applicable.

(1) For Model 767 series airplanes, line numbers up to and including 474, equipped with thrust reversers that have not been modified in accordance with Boeing Service Bulletin 767-78-0063: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 650 flight hours.

(2) For Model 767 series airplanes, line numbers 475 and subsequent; and Model 767 series airplanes equipped with thrust reversers that have been modified in accordance with Boeing Service Bulletin 767-78-0063, or a production equivalent: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 1,000 flight hours.

(f) Within 1,000 flight hours after accomplishing the modification required by paragraph (c) of this AD or after the equivalent modification (Production Revision Record B11481-70) is incorporated in production, or within 1,000 flight hours after March 9, 2000, whichever occurs later: Perform operational checks of the electro-mechanical brake in accordance with Appendix 1 (including Figure 1); sections 1.A.(1), 2.A., 2.B., and 2.D; of this AD. Repeat the operational checks thereafter at intervals not to exceed 1,000 flight hours.

Repair

(g) If any functional test or operational check required by paragraph (d), (e), or (f) of this AD cannot be successfully performed, prior to further flight, repair in accordance with Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997; or Appendix 1, section 2.B. and 2.C., of this AD; as applicable; and repeat the applicable test or check until successfully accomplished.

Terminating Action

(h) Accomplishment of the modification required by paragraph (c) or installation of an equivalent modification (Production Revision Record B11481-70) in production, and accomplishment of the periodic functional tests and operational checks required by paragraphs (d), (e), and (f) of this AD, constitutes terminating action for the tests, inspections, and adjustments required by paragraph (a) of this AD.

Alternative Methods of Compliance

(i) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

(2) Alternative methods of compliance, approved previously in accordance with AD 95-13-12, amendment 39-9292, are approved as alternative methods of compliance with this AD.

NOTE 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(j) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(k) Except as provided by paragraphs (b)(1), (d)(2), and (f) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994; and Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997; as applicable.

(1) The incorporation by reference of Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997, was previously approved by the Director of the Federal Register, as of March 9, 2000 (65 FR 5229, February 3, 2000).

(2) The incorporation by reference of Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; and Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994; was previously approved by the Director of the Federal Register, as of August 18, 1995 (60 FR 36976, July 19, 1995).

(3) Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(l) This amendment becomes effective on May 19, 2000.

FOR FURTHER INFORMATION CONTACT:

Holly Thorson, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1357; fax (425) 227-1181.

Issued in Renton, Washington, on April 26, 2000.

Donald L. Rigg, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

APPENDIX 1.**THRUST REVERSER ELECTRO-MECHANICAL BRAKE AND CDU CONE BRAKE TEST****1. General**

A. This procedure contains steps to do two checks:

- (1) A check of the holding torque of the electro-mechanical brake.
- (2) A check of the holding torque of the CDU cone brake.

2. Electro-Mechanical Brake and CDU Cone Brake Torque Check (Fig. 1)

A. Prepare to do the checks:

- (1) Open the fan cowl panels.

B. Do a check of the torque of the electro-mechanical brake:

- (1) Do a check of the running torque of the thrust reverser system:
 - (a) Manually extend the thrust reverser six inches and measure the running

torque.

- 1) Make sure the torque is less than 10 pound-inches.

- (2) Do a check of the electro-mechanical brake holding torque:

- (a) Make sure the thrust reverser translating cowl is extended at least one inch.

- (b) Make sure the CDU lock handle is released.

- (c) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip.

NOTE: This will lock the electro-mechanical brake.

(d) With the manual drive lockout cover removed from the CDU, install a 1/4-inch extension tool and dial-type torque wrench into the drive pad.

NOTE: You will need a 24-inch extension to provide adequate clearance for the torque wrench.

- (e) Apply 90 pound-inches of torque to the system.

1) The electro-mechanical brake system is working correctly if the torque is reached before you turn the wrench 450 degrees (1-1/4 turns).

2) If the flexshaft turns more than 450 degrees before you reach the specified torque, you must replace the long flexshaft between the CDU and the upper angle gearbox.

3) If you do not get 90 pound-inches of torque, you must replace the electro-mechanical brake.

(f) Release the torque by turning the wrench in the opposite direction until you read zero pound-inches.

1) If the wrench does not return to within 30 degrees of initial starting point, you must replace the long flexshaft between the CDU and upper angle gearbox.

- (3) Fully retract the thrust reverser.

C. Do a check of the CDU cone brake:

- (1) Pull up on the manual release handle to unlock the electro-mechanical brake.

- (2) Pull the manual brake release lever on the CDU to release the cone brake.

NOTE: This will release the pre-load tension that may occur during a stow cycle.

- (3) Return the manual brake release lever to the locked position to engage the cone brake.

(4) Remove the two bolts that hold the lockout plate to the CDU and remove the lockout plate.

- (5) Install a 1/4-inch drive and a dial type torque wrench into the CDU drive pad.

CAUTION: DO NOT USE MORE THAN 100 POUND-INCHES OF TORQUE WHEN YOU DO THIS CHECK. EXCESSIVE TORQUE WILL DAMAGE THE CDU.

(6) Turn the torque wrench to try to manually extend the translating cowl until you get at least 15-pound inches.

NOTE: The cone brake prevents movement in the extend direction only. If you try to measure the holding torque in the retract direction, you will get a false reading.

- (a) If the torque is less than 15-pound-inches, you must replace the CDU.

D. Return the airplane to its usual condition:

- (1) Fully retract the thrust reverser (unless already accomplished).

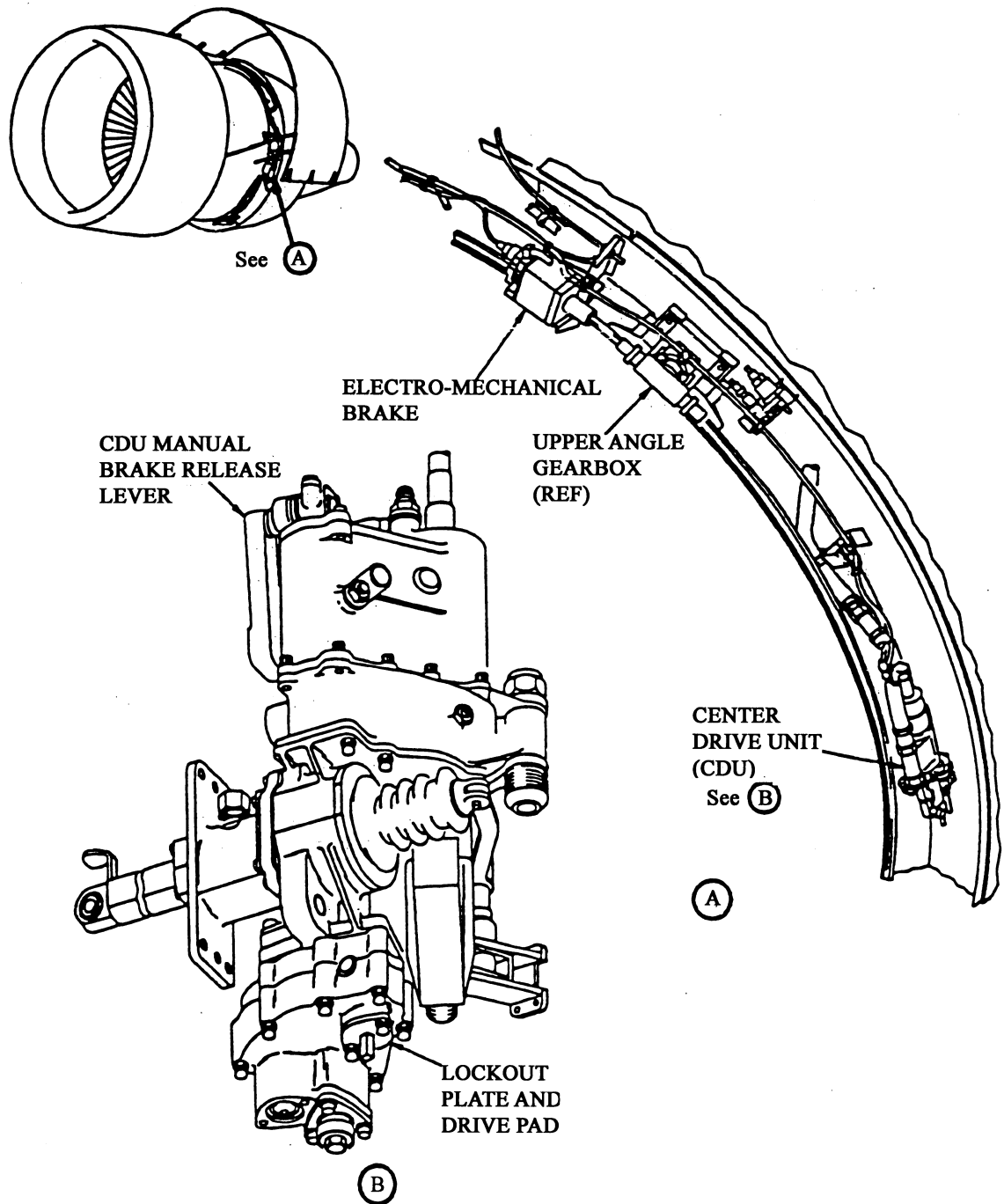
2000-09-04

(2) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip (unless already accomplished).

NOTE: This will lock the electro-mechanical brake.

(3) Close the fan cowl panels.

Figure 1



Electro-Mechanical Brake and CDU Cone Brake Torque Check

**ALLISON ENGINE COMPANY
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-09-05 ALLISON ENGINE COMPANY: Amendment 39-11714; Docket 99-NE-46-AD.

Applicability: Allison Engine Company Models AE 3007A, AE 3007A1, AE 3007A1/1, AE 3007A1/2, AE 3007A1/3, AE 3007A1P, and AE 3007C turbofan engines, with cone shafts, part numbers (P/Ns) 23050728 and 23070729, installed. These engines are installed on but not limited to EMBRAER EMB-135 and EMB-145 series and Cessna 750 (Citation X) series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (h) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent low cycle fatigue failure of cone shafts, which could result in an uncontained engine failure and damage to the aircraft, accomplish the following:

Removal from Service

(a) For Allison Engine Company model AE 3007A engines, remove cone shafts from service prior to accumulating 9,500 cycles-since-new (CSN) and replace with serviceable parts.

(b) For Allison Engine Company model AE 3007C engines, remove cone shafts from service prior to accumulating 14,500 CSN and replace with serviceable parts.

(c) For Allison Engine Company models AE 3007A1, AE 3007A1/1, and AE 3007A1/2 engines, remove cone shafts from service prior to accumulating 7,500 CSN and replace with serviceable parts.

(d) For Allison Engine Company model AE 3007A1/3 engines, remove cone shafts from service prior to accumulating 3,500 CSN and replace with serviceable parts.

(e) For Allison Engine Company model AE 3007A1P engines, remove cone shafts from service prior to accumulating 2,400 CSN and replace with serviceable parts.

New Life Limits

(f) Paragraphs (a), (b), (c), (d) and (e) of this AD establish new, lower life limits for cone shafts, P/Ns 23050728 and 23070729.

(g) Except for the provisions of paragraph (h) of this AD, no cone shafts, P/Ns 23050728 and 23070729, may remain in service exceeding the life limits established in paragraphs (a), (b), (c), (d) and (e) of this AD.

Alternative Method of Compliance

(h) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Chicago Aircraft Certification Office (ACO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Chicago ACO.

Ferry Flights

(i) No special flight permits will be issued.

Effective Date

(j) This amendment becomes effective on July 5, 2000.

2000-09-05

FOR FURTHER INFORMATION CONTACT:

John Tallarovic, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone (847) 294-8180, fax (847) 294-7834.

Issued in Burlington, Massachusetts, on April 27, 2000

David A. Downey, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service